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THE EARLY CONDITION OF MAN.\*

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IN addition to the different opinions which have always been held as to whether man constitutes one or many species, there are two very different views as to the primitive condition of the first men, or first beings, worthy to be so called. Many writers have considered that man was at first a mere savage, and that our history has on the whole been a steady progress towards civilisation, though at times, and at some times for centuries, the race has been stationary, or even has retrograded. Other authors of no less eminence have taken a diametrically opposite view. According to them, man was from the commencement pretty much what he is at present: if possible, even more ignorant of the arts and sciences than now, but with mental qualities not much inferior to our own. Savages they consider to be the degenerate descendants of far superior ancestors. Of the recent supporters of this theory, the late Archbishop of Dublin was amongst the most eminent. In the present memoir I propose briefly to examine the reasons which led Dr. Whately to this conclusion, and still more briefly to notice some of the facts which seem to me to render it untenable. Dr. Whately enunciates his opinions in the following words:—"That we have no reason to believe that any community ever did, or ever can, emerge, unassisted by external helps, from a state of utter barbarism, into anything that can be called civilisation. Man has not emerged from the savage state; the progress of any

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community in civilisation, by its own internal means, must always have begun from a condition removed from that of complete barbarism, out of which it does not appear that men ever did or can raise themselves." One might at first feel disposed to answer that fifty cases could be cited which altogether discredit this assertion. Even without going beyond the limits of our own island, we might regard the history of England itself a sufficient answer to such a statement. Archbishop Whately, however, was far too skilful a debater not to have foreseen such an argument. "The ancient Germans," he says, "who cultivated corn, though their agriculture was probably in a very rude state, who not only had numerous herds of cattle, but employed the labour of brutes, and even made use of cavalry in their wars . . . these cannot with propriety be reckoned savages, or if they are to be so called (for it is not worth while to dispute about a word), then I would admit that in this sense men may advance, and in fact have advanced, by their own unassisted efforts, from the savage to the civilised state." This limitation of the term "savage" to the very lowest representatives of the human race, no doubt renders Dr. Whately's theory more tenable, by increasing the difficulty of bringing forward conclusive evidence against it. The Archbishop, indeed, expresses himself throughout his argument as if it would be easy to produce the required evidence in opposition to his theory, supposing that any race of savages ever raised themselves to a state of civilisation. The manner in which he has treated the case of the Mandans, a tribe of North American Indians, however, effectually disposes of this hypothesis. This unfortunate tribe is described as having been decidedly more civilised than those by which they were surrounded. Having then no neighbours more advanced than themselves, they were quoted as furnishing an instance of savages who had civilised themselves without external aid. In answer to this, Archbishop Whately asks—"First, How do we know that these Mandans were of the same race as their neighbours? Second, How do we know that theirs is not the original level from which the other tribes have fallen? Thirdly and lastly, supposing that the Mandans did emerge from the savage state, how do we know that this may not have been through the aid of some strangers coming among them—like the Manco-Capac of Peru—from some more civilised country, perhaps long before the days of Columbus." Supposing however, for a moment, and for the sake of argument, that the Mandans, or any other race, were originally savages and had civilised themselves, it would still be manifestly, from the very nature of the case, impossible to bring forward the kind of evidence demanded by Dr. Whately. No doubt he "may confidently affirm that we find no one recorded instance of a tribe of savages, properly so styled,

rising into a civilised state, without instruction and assistance from people already civilised." Starting with the proviso that savages, properly so styled, are ignorant of letters, and laying it down as a condition that no civilised example should be placed before them, the existence of any such record is an impossibility. Its very presence would destroy its value. In another passage Archbishop Whately says, indeed—"If man generally, or some particular race, be capable of self-civilisation, in either case it may be expected that some record, or tradition, or monument, of the actual occurrence of such an event, should be found." So far from this, the existence of any such record would, according to the very hypothesis itself, be impossible. Traditions are shortlived and untrustworthy. A "monument" which could prove the actual occurrence of a race capable of self-civilisation, I confess myself unable to imagine. What kind of a monument would the Archbishop accept as proving that the people which made it had been originally savage, that they had raised themselves, and had never been influenced by strangers of a superior race? Evidently the word "monument" in the above passage was used only to round off the sentence. But, says Archbishop Whately, "We have accounts of various savage tribes, in different parts of the globe, who have been visited from time to time at considerable intervals, but have had no settled intercourse with civilised people, and who appear to continue, as far as can be ascertained, in the same uncultivated condition;" and he adduces one case, that of the New Zealanders, who "seem to have been in quite as advanced a state when Tasman discovered the country, in 1642, as they were when Cook visited it, one hundred and twenty-seven years after." We have been accustomed to see around us an improvement so rapid that we forget how short a period a century is in the history of the human race. Even taking the ordinary chronology, it is evident that if in six thousand years a given race has only progressed from a state of utter savagery to the condition of the Australian, we could not expect to find much change in one more century. Many a fishing village, even on our own coast, is in very nearly the same condition as it was one hundred and twenty-seven years ago. Moreover, I might fairly answer that, according to Whately's own definition of a savage state, the New Zealanders would certainly be excluded. They cultivated the ground, they had domestic animals, they constructed elaborate fortifications, and made excellent canoes, and were certainly, in his sense, not in a state of utter barbarism. Or I might argue that a short visit like that of Tasman could give little insight into the true condition of a people. I am, however, the less disposed to question the statement made by Archbishop Whately, because the fact that many races are now practically stationary is in reality an

argument against the theory of degradation and not against that of progress. Civilised races, say we, are the descendants of races which have risen from a state of barbarism. Barbarians, on the contrary, argue our opponents, are the descendants of civilised races, and have sunk to their present condition. But Archbishop Whately admits that the civilised races are still rising, while the savages are now stationary; and, oddly enough, seems to regard this as an argument in support of the very untenable proposition that the difference between the two is due not to the progress of the one set of races, a progress which every one admits, but to the degradation of those whom he himself maintains to be stationary. The delusion is natural, and like that which every one must have sometimes experienced in looking out of a train in motion, when the woods and fields seem to be flying from us, whereas we know that in reality we are moving and they are stationary. But it is argued, "If man, when first created, was left like the brutes to the unaided exercise of those natural powers of body and mind which are common to the European and to the New Hollander, how comes it that the European is not now in the condition of the New Hollander?" I am indeed surprised at such an argument. In the first place, Australia possesses neither cereals nor any animals which can be domesticated with advantage; and in the second, we find, even in the same family, among children of the same parents, the most opposite dispositions—in the same nation there are families of high character, and others in which every member is more or less criminal. But in this case, as in the last, the Archbishop's argument, if good at all, is good against his own view. It is like an Australian boomerang, which recoils upon its owner. The Archbishop believed in the unity of the human race, arguing that man was originally civilised (in a certain sense). "How comes it, then," I might ask him, "that the New Hollander is not now in the condition of the European?" In another passage, Archbishop Whately quotes with approbation a passage from President Smith, of the College of New Jersey, who says—Man, "cast out an orphan of nature, naked and helpless, into the savage forest, he must have perished before he could have learned how to supply his most immediate and urgent wants. Suppose him to have been created, or to have started into being, one knows not how, in the full strength of his bodily powers, how long must it have been before he could have known the proper use of his limbs, or how to apply them to climb the tree?" &c., &c. Just the same, however, might be said of the gorilla or the chimpanzee, which certainly are not the degraded descendants of civilised ancestors. Having thus very briefly considered the arguments brought forward by Archbishop Whately, I will proceed to state, also very briefly, some



facts which seem to militate against the view advocated by him. Firstly, I will endeavour to show that there are indications of progress even among savages; secondly, that among the most civilised nations there are traces of original barbarism. He supposes that men were from the beginning herdsmen and cultivators. We know, however, that the Australians, Tasmanians, North and South Americans, and several other more or less savage races, living in countries eminently suited to our domestic animals and to the cultivation of cereals, were yet entirely ignorant both of the one and the other. It is, I think, improbable that any race of men who had once been agriculturalists and herdsmen should entirely abandon pursuits so easy and so advantageous, and it is still more improbable that, if we accept Usher's very limited chronology, all tradition of such a change should be lost. Moreover, even if the present colonists of (say) America or Australia were to fall into such a state of barbarism, we should still find in those countries herds of wild cattle descended from those imported: and, even if these were exterminated, still we should find their remains, whereas we know that no trace of a bone either of the ox, the horse, or the domestic sheep has been found either in Australia or in the whole extent of America. So, again, in the case of plants. We do not know that any of our cultivated cereals would survive in a wild state, though it is highly probable that, in a modified form perhaps, they would do so. But there are many other plants which follow in the train of man, and by which the botany of South America, Australia, and New Zealand has been almost as profoundly modified as their ethnology has been by the arrival of the white man. The Maoris have a melancholy proverb that the Maoris disappear before the white man, just as the white man's rat destroys the native rat, the European fly drives away the Maori fly, and the clover kills the New Zealand fern. A very interesting paper on this subject, by Dr. Hooker, whose authority no one will question, is contained in the *Natural History Review* for 1864:—In Australia and New Zealand, he says, for instance, the noisy train of English emigration is not more surely doing its work than the stealthy tide of English weeds, which are creeping over the surface of the waste, cultivated, and virgin soil in annually increasing numbers of genera, species, and individuals. *A propos* of this subject, a correspondent says:—"T. Locke Travers, Esq., F.L.S., a most active New Zealand botanist, writing from Canterbury, says:—'You would be surprised at the rapid spread of European and foreign plants in this country. All along the sides of the main lines of roads through the plains, a *Polygonum*, called cow grass, grows most luxuriantly. the roots sometimes two feet in depth, and the plants spreading over an area from four to five feet in diameter. The dock (*Rumex obtusi-*

*folius* or *R. Crispus*) is to be found in every river bed, extending into the valleys of the mountain rivers, until these become mere torrents. The Sow-thistle is spread all over the country, growing luxuriantly nearly up to six thousand feet. The water-cress increases in our still rivers to such an extent as to threaten to choke them altogether.'” The Cardona of the Argentine Republics is another remarkable instance of the same fact. We may, therefore, safely assume that if Australia, New Zealand, or South America had ever been peopled by a race of herdsmen or agriculturalists, the fauna and flora of these countries would almost inevitably have given evidence of the fact, and differed much from the condition in which they were discovered. We may also assert, as a general proposition, that no weapons or instruments of metal have ever been found in any country inhabited by savages wholly ignorant of metallurgy. A still stronger case is afforded by pottery. Pottery is not easily destroyed; when known at all, it is always abundant, and it possesses two qualities—namely, that of being easy to break, and yet difficult to destroy, which render it very valuable in an archæological point of view. Moreover, it is in most cases associated with burials. It is therefore a very significant fact, that no fragment of pottery has ever been found in Australia, New Zealand, or the Polynesian Islands. It seems to me extremely improbable that an art so easy and so useful should ever have been lost by any race of men. Moreover, this argument applies to several other arts and instruments. I will mention only two, though several others might be brought forward. The art of spinning, and the use of the bow are quite unknown to many races of savages, and yet would hardly be likely to have been abandoned when once known. The absence of architectural remains in these countries is another argument. Archbishop Whately, indeed, claims this as being in his favour, but the absence of monuments in a country is surely indicative of barbarism and not of civilisation. The mental condition of savages seems also to me to speak strongly against the “degrading” theory. I have elsewhere pointed out that, according to the almost universal testimony of all writers on savages—merchants, philosophers, naval men, and missionaries alike—there are many races of men who are altogether destitute of a religion. The cases are perhaps less numerous than they are asserted to be, but many of them rest on doubtful evidence. Yet I feel it difficult to believe that any people which had once possessed a religion would ever have entirely lost it. Religion appeals so strongly to the hopes and fears of men—it takes so deep a hold on most minds—it is so great a consolation in times of sorrow and of sickness—that I can hardly think any nation would ever abandon it altogether. Where, therefore, we find a race which is now ignorant of religion, I cannot

but assume that it has always been so. I will now proceed to mention a few cases in which some improvement does appear to have taken place. According to M'Gillivray, the Australians of Port Essington, who, like all their fellow-countrymen, had formerly bark canoes only, have now completely abandoned them for others hollowed out of the trunk of a tree, which they buy from the Malays. It is said that the inhabitants of the Andaman Islands have recently introduced outriggers. The Bachapins, when visited by Burchell, had just commenced working iron. According to Burton, the Wajiji negroes have recently learned to make brass. In Tahiti, when visited by Captain Cook, the largest morai, or burial place, was that erected for the then reigning Queen. The Tahitians also had then very recently abandoned the habit of cannibalism, which we know was very common in other Pacific Islands. Moreover, there are certain facts which speak for themselves. Some of the North American tribes cultivated the maize. Now, the maize is a North American plant, and we have here, therefore, clear evidence of a step in advance made by these tribes. Again, the Peruvians had domesticated the llama. Those who believe in the diversity of species of men may endeavour to maintain that the Peruvians had domestic llamas from the beginning. Archbishop Whately, however, would not take this line. He would, I am sure, admit that the first settlers in Peru had no llamas, nor indeed any other domestic animal, excepting probably the dog. Another very strong case is the invention of the boomerang by the Australians. This weapon is known to no other race of men, with the doubtful exception of one Central African tribe. We cannot look on it as a relic of primeval civilisation, or it would not now be confined to one race only. The Australian cannot have learned it from any civilised visitors for the same reason. It is, therefore, as it seems to me, exactly the case we want, and a clear proof of a step in advance—a small one if you like—but still a step made by a people whom Archbishop Whately would certainly admit to be true savages. The rude substitutes for writing found among various tribes must also in many cases be regarded as of native origin. In the case of the system of letters invented by Mohammed Doali, a negro of the Vei country, in West Africa, the idea was no doubt borrowed from the missionaries, although it was worked out independently. In other cases, however, this cannot, I think, be maintained. Take the case of the Mexicans. Even if we suppose that they are descended from a primitively civilised race, and had gradually and completely lost both the use and tradition of letters—to my mind, by the way, a most improbable hypothesis—still we must look on their system of picture-writing as being of American origin. Even if a system of writing by letters could ever be altogether lost—which I

doubt—it certainly could not be abandoned for that of picture-writing, which is inferior in every point of view. If the Mexicans had owed their civilisation, not to their own gradual improvement, but to the influence of some European visitors, driven by stress of weather or the pursuit of adventure into their coasts, we should have found in their system of writing, and in other respects, unmistakable proofs of such an influence. Although, therefore, we have no historical proof that the civilisation of America was indigenous, we have in its very character evidence, perhaps, more satisfactory than any historical statements would be. The same argument may be derived from the names used for numbers by savages. I feel great difficulty in supposing that any race which had learned to count up to ten would ever unlearn a piece of knowledge so easy and yet so useful. Yet we know that few, perhaps none, of those whom Archbishop Whately would call savages, can count so far. No Australian language contained numerals for any number beyond four; the Dammaras and Abipones use none beyond three; some of the Brazilian tribes cannot go beyond two. In many cases when the system of numeration is at present somewhat more advanced, it bears on it the stamp of native and recent origin. Among civilised nations the derivations of the numerals have long since been obscured by the gradual modification which time effects in all words, especially those in frequent use, and before the invention of printing. And if the numerals of savages were relics of a former civilisation, the waifs and strays saved out of the general wreck, though we could not expect to trace them up to that original language which in such a case must have existed, yet we certainly should not find them such as they really are. I cannot, of course, give to this argument all the development of which it is capable, but I will quote a short passage from a very interesting lecture delivered before the Royal Institution, by my friend, Mr. Tylor, in which some of the facts are clearly stated, and with an authority which no one will gainsay:—Among many tribes of North and South America and West Africa are found such expressions as—for five, “a whole hand;” and for six, “one to the other hand;” ten, “both hands;” and eleven, “one to the foot;” twenty, “one Indian;” and twenty-one, “one to the hands of the other Indian;” or for eleven, “foot one;” for twelve, “foot two;” for twenty, “a person is finished;” while among the miserable natives of Van Diemen’s Land the reckoning of a single hand—viz., five, is called *puganna*, “a man.” For displaying to us the picture of the savage counting on his fingers, a being struck with the idea that if he describes in words his gestures of reckoning, these words will become a numeral, perhaps no language approaches the Zulu. Counting on his fingers, he begins always with

the little finger of his left hand, and thus reaching five, he calls it "a whole hand;" for six, he translates the appropriate gesture, calling it *tatisitupa*, "take the thumb," while seven, being shown in gesture, by the forefinger, and this finger being used to point with, the verb *komba*, "to point," comes to serve as a numeral expression, denoting seven. Here, then, surely we have just the evidence which Archbishop Whately required. These numerals are recent, because they are uncorrupted, and they are indigenous, because they have an evident meaning in the language of the tribes by whom they are used. Again, we know that many savage languages are entirely deficient in such words as "colour," "tone," "tree," &c., having names for each kind of colour, every species of tree, but not for the general idea. I can hardly imagine a nation losing such words if it had once possessed them. Other similar evidence might be extracted from the language of savages; and arguments of this nature are entitled to more weight than statements of travellers as to the objects found in use among savages. Suppose, for instance, that an early traveller mentioned the absence of some art or knowledge among a race visited by him, and that later ones found the natives in possession of it. Most people would hesitate to receive this as a clear evidence of progress, and rather be disposed to suspect that later travellers, with perhaps better opportunities, had seen what their predecessors had overlooked. This is no hypothetical case. The early Spanish writers assert that the inhabitants of the Ladrone Islands were ignorant of the use of fire. Later travellers, on the contrary, find them perfectly well acquainted with it. They have, therefore, almost unanimously assumed, not that the nations had made a step in advance, but that the Spaniards had made a mistake; and I have not brought this case forward in opposition to the assertions of Whately, because I am honestly of the same opinion myself. I refer to it here, however, as showing how difficult it would be to obtain satisfactory evidence of material progress among savages, even admitting that such exists. The arguments derived from language, however, are liable to no such suspicions; but tell their own tale and leave us at liberty to draw our conclusions. I will now very briefly refer to certain considerations which seem to show that even the most civilised races were once in a state of barbarism. Not only throughout Europe, not only in Italy and Greece, but even in the so-called cradle of civilisation itself—in Palestine and Syria and in India—the traces of the stone age have been discovered. It may, indeed, be said that these were only the fragments of those stone knives, &c., which we know were used in religious ceremonies long after metal was in general use for secular purposes. This indeed reminds one of the attempt to account for the presence of elephants'

bones in England, by supposing that they were the remains of elephants which might have been brought over by the Romans. But why were stone knives used by the Egyptian and Jewish priests? Just because they had been at one time in general use, and there was a feeling of respect or reluctance to use the new substance in religious ceremonies. There are, moreover, other considerations which point very decidedly to the same conclusion. It is well known that among various savage tribes female virtue is looked on with a very indifferent eye. Some savages have not—I will not say have not arrived at—the idea of marriage. I cannot here bring forward evidence in support of this statement, but every one who has taken any interest in the lower races of men will admit that a savage's wives are essentially a part of his property, as much so as his dog or his slave; and hence, when a man dies, his brother takes possession of the widows, together with the rest of the property. In those cases, where women are treated with rather more justice, the first results are, according to our ideas, of doubtful advantage. Among the Andaman Islanders, for instance, the man and woman remain together only until the child is born and weaned, when they are free to separate and pair with others. In other cases, marriage may be terminated at the wish either of the husband or the wife. In others, again, the tie is of such a nature that it affords not even a presumption as to parentage. The result of this is, that many savages have no idea of any relationship by paternity; they recognise kinship through the female line only. This is the case with the Australians, the Fijians, and, indeed, the South Sea Islanders generally; the ancient Celts, Greeks, the Kasias, Nairs, and other tribes in Hindostan; some of the Cossack hordes, many negro tribes, etc., etc., while traces of it occur over all the world. For the same reason, a man's heirs are not his own children, but those of his sisters; while, probably again for the same reason, the Wanyamwezi have the (at first sight) inexplicable custom that a man's property goes to his illegitimate children, and not to his lawful offspring. Thus, then, by tracing up the gradual construction of the idea of marriage, we can account for the two extraordinary customs which we find in every part of the world—that a man is regarded as no relation to his own children, and that his property goes not to them, but to those of his sisters. As things improved, and the probability of parentage became greater, kinship through females only would gradually be abandoned. Many savages have not yet advanced so far, others have recently made the change—as, for instance, the Ait-Iraten, who did so less than a century ago, and erected a stone pillar in memory of the event. Even, however, among the most civilised nations, we find in early history traces of this progression. Thus, among the early Jews, Abraham married his

half-sister. Nahor married his brother's daughter, and Amram married his father's sister. Here we see the system of kinship through females only. These women were not at that time regarded as relatives, though at a later period in Jewish history they would have been so. The custom that when a man died childless his brother married the widow is another case in point, as also is the touching story of Ruth and Boaz. Similar considerations, as Mr. McLennan points out in his excellent book on *Primitive Marriage*, prove that the Romans were "at one time *in pari passu* as regards the administration of justice with many races, which we find ignorant of legal proceedings, and dependent for the settlement of their disputes on force of arms or the good offices of friends;" while, as regards marriage, we find customs both among the Greeks and Romans which point back to the time when those polished peoples were themselves mere savages. Even among ourselves a man is in the eye of the law no relation to his own children unless they are born in wedlock. He is related to his own offspring not by blood, but through his marriage with the mother. If marriage has not taken place they have no right to his name, and should he leave them any of his property, the State steps in and claims ten per cent., on the ground that they are no relations of his. Thus, then, we can trace up among races in different stages of civilisation every step, from the treatment of woman as a mere chattel to the sacred idea of matrimony as it exists among ourselves, and we find clear evidence that the gradual change has been one of progress and not of degradation. Civilised nations long retain traces of their ancient barbarism; barbarous ones no relics of previous chivalry. As the valves in the veins indicate the direction of the circulation, so can we trace the gradual progress of respect for women, which is one of the noblest features of our modern civilisation. Before quitting this interesting subject, I may add that many nations have traditions of the origin of marriage. Among the Egyptians it is attributed to Menes, among the Chinese to Fohi, the Greeks to Cecrops, the Hindoos to Soctaketu. If the idea of marriage had been coeval with our race, if marriage had always appeared as natural, I might say as necessary, as it does to us, such traditions could scarcely have arisen. In the publications of the Nova Scotian Institute of Natural Science is an interesting paper by Mr. Haliburton on "The Unity of the Human Race, proved by the universality of certain superstitions connected with sneezing." "Once establish," he says, "that a large number of arbitrary customs, such as could not have naturally suggested themselves to all men at all times, are universally observed, and we arrive at the conclusion that they are primitive customs which have been inherited from a common source, and, if



inherited, that they owe their origin to an era anterior to the dispersion of the human race." To justify such a conclusion, the custom must be demonstrably arbitrary. The belief that two and two make four, the division of the year into twelve months, and similar similarities, of course, prove nothing. But I very much doubt the existence of any universal, or even general, custom of a clearly arbitrary character. The fact is, that many things appear to us arbitrary and unaccountable because we live in a condition so different from that in which they originated. Many things seem natural to a savage which to us are unaccountable. Mr. Haliburton brings forward, as his strongest case, the habit of saying "God bless you," or some equivalent expression, when a person sneezes. He shows that this custom, which I admit appears to us at first sight both odd and arbitrary, is ancient and widely extended. It is mentioned by Homer, Aristotle, Apuleius, Pliny, and the Jewish Rabbis, and has been observed in Florida, in Otaheite, and in the Tonga Islands. That it is not arbitrary, however, Mr. Haliburton himself shows, and it does not, therefore, come under his rule. A belief in invisible beings is very general among savages, and while they think it unnecessary to account for blessings, they attribute any misfortune to the ill-will of these mysterious beings. Many savages regard disease as a case of possession. In cases of illness they do not suppose that the organs are themselves affected, but that they are being devoured by a god. Hence their medicine-men do not try to cure the disease, but to extract the demon. Some tribes have a distinct deity for every ailment. The Australians do not believe in natural death. When a man dies they take for granted that he has been destroyed by witchcraft, and the only doubt is who is the culprit. Now a people in this state of mind—and we know that almost every race of men is passing or has passed through this stage of development—seeing a man sneeze, would naturally and almost inevitably suppose that he was attacked and shaken by some invisible being. Equally natural is the impulse to appeal for aid to some other invisible being more powerful than the first. Mr. Haliburton admits that a sneeze is "an omen of impending evil;" but it is more—it is evidence which, to the savage mind, would seem conclusive that the sneezer was possessed by some evil-disposed spirit. Evidently, therefore, this case, on which Mr. Haliburton so much relies, is by no means an "arbitrary custom," and does not therefore fulfil the conditions which he himself laid down. He has incidentally brought forward some other instances, most of which labour under the disadvantage of proving too much. Thus he instances the existence of a festival in honour of the dead, "at or near the beginning of November." Such a feast is very general, and as

there are many more races holding such a festival than there are months in the year, it is evident that in several cases they must be held together. But Mr. Haliburton goes on to say, "The Spaniards were very naturally surprised at finding that, while they were celebrating a solemn mass for All Souls on the 2nd of November, the heathen Peruvians were also holding their annual commemoration of the dead." This curious coincidence would, however, not only prove the existence of such a festival "before the dispersion" (which Mr. Haliburton evidently looks on as a definite event which took place at a definite time, instead of being a gradual process), but also that men were at that epoch sufficiently advanced to form a calendar and keep it unchanged down to the present time. This, however, we know was not the case. Mr. Haliburton again says—"The belief in Scotland and Equatorial Africa is found to be almost precisely identical respecting there being ghosts even of the living, who are exceeding troublesome and pugnacious, and can be sometimes killed by a silver bullet." Here we certainly have what seems to be an arbitrary belief, but if it proves that there was a belief in ghosts of the living before the dispersion, it also proves that silver bullets were then in use. This illustration is, I think, a very interesting one, because it shows that similar ideas in distant countries owe their origin, not "to an era before the dispersion of the human race," but to the original identity of the human mind. While I do not believe that similar customs in different nations are "inherited from a common source," or are necessarily primitive, I certainly do see in them an argument for the unity of the human race, which, however, be it remarked in parenthesis, is not necessarily the same thing as the descent from a single pair. In conclusion, then, while I do not mean for a moment to deny that there are cases in which nations have retrograded, I regard these as exceptional instances. The facts and arguments which I have here very briefly indicated might have been supported by many other illustrations which I could not specify without unduly extending a communication already somewhat too long. They, however, I think, afford strong grounds for the following conclusions—namely, that existing savages are not the descendants of civilised ancestors; that the primitive condition of man was one of utter barbarism; that from this condition several races have independently raised themselves. These views follow, I think, from strictly scientific considerations. We shall not, however, be the less inclined to adopt them on account of the cheering prospects which they hold out for the future. If the past history of man has been one of deterioration, we have but a groundless hope of future improvement; but, on the other hand, if the past has been one of progress, we may fairly hope that

the future will be so too; that the blessings of civilisation will not only be extended to other countries and other nations, but that even in our own land they will be rendered more general and more equable, so that we shall not see before us always, as now, multitudes of our own fellow-countrymen living the life of savages in our very midst, neither possessing the rough advantages and real, though coarse, pleasures of savage life, nor yet availing themselves of the far higher and more noble opportunities which lie within the reach of civilised man.

## DISCUSSION.

The CHAIRMAN (Sir R. Murchison) said he was rejoiced that the members had, by their applause, shown their approbation of the paper they had just heard from Sir John Lubbock, one of the most eminent of all the men of science who were now leading what was called the new school as to the pre-historic antiquity of man. So far as his own particular studies went, he (the chairman) was convinced that there had been a great progression throughout all the works of nature; and, so far as he was capable of judging of the value of this communication of Sir John Lubbock's, he would say that geological evidences, at the end of the scale, as it were, where they terminated their explorations and investigations—those evidences which had been derived from the finding of those flint implements that had evidently been manufactured and used by man, and from the finding of other relics in caves associated absolutely with the remains of man—had given rise to this great school of pre-historic inquirers, of which he might say that Sir John Lubbock was quite at the head. This great class of inquirers had for some years held congresses over the continent of Europe in different places. They had held six or seven different meetings, and it was the intention of this International Pre-Historic Association or Congress to meet in Great Britain in 1868. He had only to say, that if they looked round this country they would not find a more fitting gentleman to preside over that International Congress than Sir John Lubbock.

Mr. CRAWFURD said he had listened with very great pleasure to the elaborate, ingenious, and interesting paper of Sir John Lubbock, and he had really hardly any objection to make to it. That was something new for him. He was rather surprised, however, that Sir John should have taken so much pains with the late Archbishop of Dublin, who had endeavoured to uphold what he would term a most abominable paradox, but he had laid the poor bishop on his back in very much the same manner as one would turn a turtle, and, as some people were inclined to think, that some other bishops would be none the worse of being treated. Still, the late Archbishop of Dublin, to whom he had had the honour of being presented, was a most learned and most ingenious man, and a valuable and a useful man, notwithstanding what he would still call his abominable paradox. The archbishop had stated that the New Zealanders and the Tasmanians were exactly in the same position when Tasman discovered these lands as they

were at the time of Cook, one hundred and fifty years later ; and no doubt they were so, for they had no means of escaping from that position. If it had been possible to have met these people a thousand or ten thousand years before, they would have been exactly unchanged. They were not of very high capacity, although the New Zealanders were certainly of a higher capacity than the Australians ; but they had no means of getting higher. They went as far as it was possible for them to go in the circumstances, and it was impossible for them to go higher. They had neither capacity for it, nor means nor opportunities ; and if we ourselves are more advanced than the Australians, yet if we had neither corn, nor coals, nor metals, nor any of these means, we should have been savages to this hour. Aye, the very people of Dundee, now so far advanced, would have been no better than savages. But it is asked how could men subsist unless they had been somewhat civilised ? His (Mr. Crawford's) own opinion was that, when they came into the world, they had nothing to support them. They were without language, and without any arts whatsoever ; but they had brains, and they had hands, and these hands would soon be in possession of clubs, if these were only obtained by tearing off the branch of a tree. They would find the dead bodies of animals, and would eat them ravenously, and they would soon begin to kill the wild animals for themselves. The best account that had ever been given of this early state of man was that given by their friend Charles Darwin, whose eminent name was well known. He described the condition of things in *Tierra del Fuego*, which had been unvisited for hundreds of years ; and from being ignorant of the existence of man the animals did not attempt to escape. The only exceptions were the travelling birds of passage, but they had no doubt seen human beings elsewhere. Mr. Darwin gave a most excellent account of how the natives of that country lived without clothing ; and he (Mr. Crawford) would most strenuously recommend every one to read Mr. Darwin's account of his voyage in the *South Pacific*—it was the best book of travels that had been written for the last hundred years. He (Mr. Crawford) observed that it was mentioned that European breeds were largely introduced into New Zealand and New Holland, and they being stronger and more powerful than the breeds of these countries, were fast displacing them, just as the Europeans were displacing the native inhabitants. As an instance of this, he mentioned a particular kind of grass that had been introduced into New Holland from India some fifty or sixty years ago, and it was now spread over hundreds of miles of country. Then, as to religion, he believed that what might be called religion existed among all mankind, even among the very lowest class. It might not be religion as the word was popularly understood in this country ; but the superstitious belief in demons, to which all evil was ascribed, was just a thing of the same kind. These superstitions existed universally. He never yet heard of a race of men who were without that kind of worship of demons, or who did not deprecate the wrath of higher beings. As to the numerals, Sir John Lubbock had stated that the Australians could count as high as four, but their four was just two twice over.

Then, as to the Malays, they were a very advanced people, relatively speaking. They could count as far as one thousand, but beyond that they had to use the Sanscrit or Hindu, which had higher numerals, and with these they could count as high as ever they pleased. As to the sneezing theory of Mr. Haliburton's *Sam Slick*, it was an old whim, and nothing else. When a person sneezed, some said "God bless you," and others said "Bismillah;" but the idea of tracing the races of man by the custom of sneezing, seemed to him (Mr. Crawford) to be perfectly ridiculous.

Professor BUSK said he had unfortunately been unable to hear the commencement of Sir John Lubbock's paper, and therefore he was unaware whether Sir John had begun by defining what he meant by civilisation. That, he (Dr. Busk) thought, was a previous question, which should be settled before they could almost enter into the substance of this paper. The word civilisation might be explained in several ways. In one sense it might be regarded as the obtaining of a command over the powers of nature, and the invention and application of useful arts; but in another and a much higher sense, civilisation meant the cultivation of moral qualities and of intellectual pursuits. Now, when they regarded mankind from this last point of view, he thought the results would be very different from those which should be arrived at if they considered civilisation simply in the broad sense of the mere application of useful arts for purposes of ordinary life. In the higher sense of the word "civilisation," they had at the present time in the world perhaps three, but at all events two, distinct kinds of civilisation. They had the Chinese in the westward parts of Asia, the origin of which was lost in remote antiquity; they had, secondly, a civilisation in western Europe, and probably throughout Hindostan, though that might perhaps be a distinct centre, but at any rate it diverged at a very remote period from European civilisation. But the one to which he was particularly desirous of drawing attention, was the civilisation of Europe, which was drawn entirely from the Greeks—for all modern inquiry, even in the form of physical inquiry, was to be traced to the ancient civilisation of Greece. He thought that in one sense—that was the intellectual sense—the moderns had not advanced one single degree beyond the civilisation of ancient Greece—there had been no progress whatever in that respect. Of course, there had been a great acquirement of physical knowledge, and an abundant application of that knowledge to the useful arts. The condition of mankind had been very much improved in consequence; but the real essential civilisation of the human mind had not advanced, he supposed, in Western Europe from the time of Aristotle and Plato to the present. They reasoned in the same way as we do; they had almost the same moral sentiments—and the higher among them, those of Socrates, for instance, were equal to ours. There had been no advance in civilisation in that direction, so far as he (Dr. Busk) could see from the period of these great men, and probably for some time before it. The origin of this Greek civilisation was as yet a great mystery; but he thought he might say, expressing himself widely, that all the civilisation in the world with

which they were acquainted, leaving out the Chinese, was due to one source, whatever that source was, although it was lost, like that of the Chinese, in the remotest antiquity. They had no evidence of nations which had been debarred, from their geographical position and circumstances, from coming within the sphere of this Greek civilisation. They had no instance of any nations having become civilised except as they had come into contact with it since. The whole civilisation—or so called civilisation, which was merely the invention of industrial arts among savage nations, with the exception of a trifling influence of that kind—the whole of their advance was due to their contact with the European mind; he thought no one could deny that. He fully concurred with Sir John Lubbock in the assertion that these savage nations were not degenerated from any former condition of civilisation of any kind; but at the same time he was hardly prepared to admit that there was any evidence to show that savage nations had the power of advancing themselves by their own unaided intellect. They had a striking instance to the contrary in the case of the African continent, or rather that part of it south of the Great Desert. That part of Africa, of course, was quite cut off from the rest of the world, as well in modern as in ancient times. Those Ethiopian races had existed in Africa in vast multitudes, in some of the most fertile countries in the world, with every possible advantage of metals and minerals, and with abundance of animals which they might have tamed, and which other races than themselves had. He referred to the African elephant; the negro had never domesticated it, though it was perfectly capable of domestication. The negro was so stationary a creature, that he had never from the beginning of time invented an alphabet, or built a ship, or domesticated a single animal: he was as great a savage as he had been in the early dawn of his country. He had never been brought sufficiently in contact with European civilisation; but, even if he were, it seemed doubtful whether he would ever advance to be more than a mere copyist; but that he would never originate ideas, either moral or intellectual.

Sir WALTER ELLIOT, who spoke very inaudibly, was understood to ask Sir John Lubbock whether it was not the case that no race of men had ever been discovered who were not possessed of highly artificial language. It might be awkward in construction, and there might, perhaps, be great poverty of words, and a want of well digested and well prepared grammar; but it was almost impossible to conceive that savages gradually emerging from utter barbarism should be able to form a structure of grammar such as was to be found among them. There were instances of races falling from a high civilisation to a lower. He mentioned, in detail, several Indian races as an illustration of this, who had fallen from a state of high civilisation, and some branches of which were now among the most degraded sections of the people. He also related as a curious fact that an instrument like the boomerang of Australia was represented on some of the Egyptian monuments, and had evidently been in use among that people three thousand years ago.

The Rev. H. B. TRISTRAM said he did not intend to enter into an



argument with Sir John Lubbock as to the conclusions to which he had come, but he wished to suggest to him whether his statements and facts were not compatible with some other conclusion than that at which he had arrived. He most thoroughly and heartily agreed with Sir John Lubbock in the emphatic statement which he had put forth of the original identity of the human mind, and in the noble aspiration with which he concluded his most intensely interesting address; but at the same time he would suggest—and he was sure Sir John Lubbock would be the last man to object to give him a large draft on the bank of time—whether many races which had not yet risen might still rise to a higher place in the scale of civilisation. Professor Busk, for instance, had mentioned the case of the African. He (Mr. Tristram) thought the professor hardly did justice to the negro, for while on the Gold Coast and the Slave Coast even the commonest arts of life had been lost, and lost from the earliest time of which the Portuguese voyagers gave us any account of the Guinea Coast, yet in the interior of the country south of the Sahara, in the centre of Senegambia, many of those arts were found, such as malting barley, weaving and dyeing, and smelting iron. These arts certainly told of a civilisation which put the negro a little above the position in which Professor Busk would place him. But granting that the negro had as yet shown no aptitude for or power of invention, and that he had never risen without our help, was there not a time when the civilisation of the Greek race was far behind that of the Egyptian race? Did not history seem to say that there was some sudden start at some period? First, the Chinese civilisation, then the Assyrian, then the Egyptian, then the Greek civilisation, of which we are the successors, which had arisen at different periods, in different nations, perhaps independent of each other; but ever since these civilisations arrived at a certain height, Dr. Busk tells us, they have not advanced. Perhaps they did not; certainly the Chinese and the Assyrians did not advance, and the Egyptians were stationary for many ages. May not these other races have their turn to advance, if they have a sufficient draft on the bank of time, and produce, too, their Socrates and Plato? Then he thought Sir John Lubbock had hardly given sufficient allowance to one very probable way in which the islands in those distant regions were peopled. If the northern parts of Europe were peopled with outcasts from civilisation—if they were peopled with shipwrecked crews cast on shore in boats—was it not most probable that these individuals could not possibly, from the force of circumstances, on their first arrival preserve their arts; and then the very first terms of language that they would lose would surely be the abstract terms. While they would preserve the names of any particular tree, the abstract idea of a tree would be the very first that they would lose. He (Mr. Tristram) was submitting this on the hypothesis that there had been degradation, as directly opposed to Sir John Lubbock; he was submitting that it was true that Sir John's facts might be reconciled with the hypothesis of degradation, which he himself believed in most firmly. He never could see anything in the state of these savages which might not be easily accounted for by



their isolation; and the difficulty of the unity of language seemed to him to arise from the fact that as they lost their knowledge of the arts, they lost all terms of speech which represented those arts that they had forgotten. He did not see it was impossible to reconcile Sir John's facts with the fact of all barbarism being a degradation from a previous civilisation—not such a civilisation as we have at present, but such a civilisation as existed at present in Arabia, Armenia, and the plateau of Northern Asia.

Dr. JAMES HUNT said he had just one or two questions to put to Sir John Lubbock respecting his most interesting and valuable paper; but before doing so, he wished to say that he entirely disagreed with Professor Busk respecting his opinion that there had been no advance in the civilisation of the people of Western Europe during the last two thousand years. Two thousand years ago there were a small people who had arrived at a very high state of intellectual culture and civilisation, but it was no less true that that was confined to a very small portion of Europe, and that since that period it had extended throughout the whole area of the continent. They saw, then, a centre from which civilisation radiated; but there were, no doubt, other centres at this time from which a higher civilisation was again radiating, and possibly Dundee was one of these centres. With regard to his opinion that no savage race had advanced, that was also to some extent the opinion of the author of the paper. He had told them that there were several races who had raised themselves, but it was only a question of degree, and he understood Sir John Lubbock to mean that these savage races had raised themselves only to a certain position. With regard to the opinion advanced by Dr. Whately many years ago, he might mention that he (Dr. Hunt), when Secretary of the Ethnological Society, received a letter from the archbishop, asking him to bring the subject before the ethnologists of this country, and to request of them some reply to the doctrine he then advanced. He thought that, up to this time, there had been no real scientific satisfactory reply to the questions Whately had propounded. He said they never knew of any savages civilising themselves, and that, therefore, civilisation was the original state of man. Now, he (Dr. Hunt) was very much surprised when Mr. Tristram told them that, after this conclusive and exhaustive satisfactory and final answer to the question, and the facts there brought forward, that there was any member of the Association who would still advance the opinion which they had heard from Mr. Tristram, and that he still held that view. The facts brought forward by Sir John Lubbock appeared to his mind to be so conclusive that it would be utterly useless to attempt to argue or say anything more on the subject. Sir John seemed to have brought forward all the evidence in such a clear manner as to leave no mistake on the minds of those who were open to conviction that the original state of man was not certainly that which was depicted by those who believed it to be a high state of civilisation.

Mr. TRISTRAM—I did not say a high state.

Dr. HUNT—Mr. Tristram says he did not say a high state of civili-

sation, but that does not alter the question at all. The question still remains, and the facts that have been brought forward sufficiently prove, that the original state of mankind was not what can be called a state of civilisation. With regard to the unity of language of which Mr. Tristram spoke, he (Dr. Hunt) could not confirm such a theory. The progress of scientific inquiry with regard to that point at present showed that there were great diversities which could not be reconciled by any theory of unity. Mr. Tristram had told them that they must wait with regard to the civilisation of the negro and other savage races, but that was not science. They had to found science on facts which they at present knew. They were not called upon, before bringing forward a scientific theory, to say what might take place in the future. All they could do was to trace the history of the races in the past, and see according to that what were the theories to be propounded. Sir John Lubbock, in his paper, had very well said that there were several races without religion and without any idea of a God, as it was understood in Western Europe. But there were comparatively few who did not worship some evil spirit—some spirit which was equivalent to what was known in Western Europe under the name of the Devil. Possibly, Sir John Lubbock would state whether he knew of any race which did not worship some evil spirit or other. With regard to the original unity of the human mind, to which Sir John had alluded, he (Dr. Hunt) must confess his entire ignorance of what was intended. The original unity of the mind! what did that mean? Did Sir John Lubbock mean an original unity in the shape and the form and the size of the brain or the skull? If he did, then he (Dr. Hunt) must entirely differ from him; but if he meant an original unity of all animal life, then he for one had no objection to that expression; or if he meant to say the original unity of all organic nature, he should not raise the slightest objection to the words; but he should be very glad to know exactly what was meant by Sir John Lubbock with regard to the words, "the original unity of the human mind." With regard to the conclusions to which Sir John Lubbock had come, he entirely agreed with the first and second. As to the third, that several races had raised themselves, perhaps Sir John would kindly mention any race which had done so. He (Dr. Hunt) did not know at this moment of any race who had raised themselves since we first knew them, with the exception of the races of Europe. The whole races of mankind appeared to him to have derived their progress and their advancement in civilisation from the European races. Then Mr. Crawford had told them that there were men with brains but without language. He (Dr. Hunt) entirely differed from that statement. He did not think that the existence of such beings was even possible, judging from what was now known, that wherever you had brains there you had language, and it was just that great development of brain which was found in man that exactly corresponded to the development of language. To refuse means of communication between the lower animals in the present state of the inquiry was what he thought no scientific man would advance. That they had means of communication there was the best reason to suppose, and

therefore it was that he could not imagine that those beings could be called men when they were without language, because he did not think that with the brain that was possible. He had only to say, in conclusion, how heartily he agreed with the paper as a whole.

Sir JOHN LUBBOCK, in reply, said he thought the remarks which had fallen from Mr. Tristram and Dr. Hunt showed the necessity there was for his reference to the opinions of Archbishop Whately, which had been called in question by Mr. Crawford. In answer to the remarks of Mr. Crawford about religion, he would only repeat that many travellers had met with savage races who had no knowledge of religion. Professor Busk had asked him to define civilisation; perhaps the best definition he could give him was to say that he regarded Professor Busk himself as being a very good specimen of civilised man. After a brief reference to the remarks of Sir Walter Elliot and Mr. Tristram, Sir John said Dr. Hunt had asked him for some cases of nations who had raised themselves. He thought many might be given, but he would merely mention the Chinese, Mexicans, and Egyptians as three races who appeared to him to have raised themselves to a certain amount of what Professor Busk would still permit him to call civilisation, independently of any assistance from one another.

The discussion then terminated. The foregoing report of speeches, as well as Sir J. Lubbock's paper, is taken *verbatim* from the *Dundee Advertiser*.

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### DARWINISM IN GERMANY.\*

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SCHILLER speaking of Kant and his interpreters, says:—

“Wie doch ein einziger Reicher so viele Bettler in Nahrung  
Setzt; wenn die Koenige bauen, haben die Kärner zu thun.”†

This distich applies singularly to the remarkable work of Darwin *On the Origin of Species*. It has been translated into most continental languages, has set the scientific world at loggerheads, and has stimulated the speculative and logical faculties of philosophers, naturalists, and anthropologists.

It is well known that the delay of Cervantes in publishing the second part of his famous *Don Quixote*, induced an anonymous scribbler

\* *Der Mensch, seine Abstammung und Gesittung im Lichte der Darwin'schen Lehre*, etc., von Dr. Friedrich Rolle, Frankfurt-a.-Maine, 1865. (Man, his origin and culture, by the light of Darwin's *Theory of the Origin of Species*.)

† “See how one Croesus feeds beggars in number.

When builders are royal, how active the carmen!”

to publish a spurious continuation of it, which was, however, speedily supplanted by the master publishing a sequel of his own. Mr. Darwin's book is expressly a preliminary work, an introduction to a more elaborate publication, in which what is there indicated as regards man will be fully, as we trust, developed; when, as he promises us, "psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity of gradation, and when light will be thrown on the origin of man and his history."

It is not, of course, our object in this place, to deal with Darwin's theory, but simply to express an opinion whether Dr. Rolle has accomplished his task.

The work before us owes, as we learn from the prospectus, its origin to the favourable reception by the public of a treatise written by the same author, *On Darwin's Theory of the Origin of Species*. This encouraged him to expand the essay into a volume, by applying Darwin's doctrine to man, his descent, and mental development, etc.

The book is divided into six chapters. 1. Ancient and modern theories on the origin of man. 2. Hereditariness and variation. 3. Darwin's theory of the struggle for existence and natural selection applied to man. 4. Descent and development. 5. Races and varieties of the human species. 6. Geological history of the human species. It will thus be seen that, strictly speaking, there is but one chapter devoted to the application of the Darwinian theory, and on another occasion we shall revert to this chapter.

We briefly summarise a few of the conclusions arrived at by the author.

The origin of man and the development of his physical and mental capacity rest upon natural processes, and are the legitimate consequences of prior developments of living forms reaching back to the remotest periods of the history of the earth. In the words of Oken, "MAN IS DEVELOPED, NOT CREATED." Neither the body nor the mind of man renders the hypothesis of a direct creation of man from a lifeless matter necessary. Had not Lamarck's doctrine been ignored or ridiculed, Darwin's theory—which is engendered by it, reappears in a different form, and is supported by more incisive scientific experiments—would not have touched to the quick certain authorities in science. After the lapse of millions of years, we may be unable to trace the development process, but the progress from the ovulum to the developed organism, the development from the cell to the mature state, is patent. All acquisitions of modern science indicate the development from the simple to the compound, and the eternity of matter and force. The fossils in the geological archives are the ancestors of man. The geological history of the earth shows that the

vast number of forms which we systematise under classes, orders, families, genera and species, have not existed at all times, but have appeared in the course of long periods, and that the more perfect types appeared later, and man latest of all. It is clear that such a progress does not indicate creation from lifeless matter, but a development and transmutation.

The geological records are no doubt full of gaps; many former living forms have in the course of time been destroyed, but we are fully justified in anticipation of future discoveries to bridge over these blanks.

Dr. Rolle, we believe, lays no claim to originality. We have, at all events, been unable to find any new arguments, nor are the subjects discussed placed before the reader in a new light. The author is moreover, to judge from many slips, evidently not perfectly familiar with the current literature on anthropology. We find, therefore, Blumenbach and Prichard quoted at greater length than the avowed object of the work warrants; even the customary five races of mankind in appropriate costume, taken from Lawrence's *Lectures on Comparative Anatomy*, adorn the title-page. The work, therefore, derives its value neither from the information it conveys, nor from the vigour with which an important hypothesis is worked out. The great recommendation of the book is, that it is written in an easy style; that the well-known subjects, such as transmission of characters, acclimatisation, variation, etc., are presented in a condensed but very readable form. We believe, therefore, that as a little handbook on the more prominent problems of anthropology, it will and deserves to become popular.

We are especially anxious not to do Dr. Rolle any injustice; for we believe that his book is calculated to do much good. It is by such popular works that scientific superstition will be destroyed. The author writes avowedly for a popular audience, but does not attempt to beguile his readers with long meaningless sentences or evasive statements. The work is a very fair compilation on a very difficult and interesting question, and did space permit, we might be tempted to present a translation of it to our readers. On this occasion, however, we can only find room for the translation of the introduction, which runs nearly as follows:—

“The earliest histories of peoples as we find them in the historical and religious records of Indians, Persians, Egyptians, Hebrews and Greeks, afford no satisfactory clue to the *origin of man*. A variety of ancient theories and interpretations, more or less in accordance with the thinking and sensitive nature of man, have indeed reached us, but they are unsatisfactory, as they do not accord with our present knowledge of the immutable connection between cause and effect. We thus arrive at the conviction that the human species now existing,

furnished as it is with an accumulation of facts acquired by the progress of science, is perfectly justified in attempting the solution of the old problem by a method of its own. The starting points being different, it is clear that the results must more or less differ from those transmitted to us by ancient civilised peoples. This conflict of ideas must necessarily wound some prejudices which time will heal. Old traditions and the results of modern researches generally agree in this, that as regards the origin and development of humanity, the compound grew out from the simple. We may also add, putting aside some few other theories, that from the imperfect arose the perfect, and from a rude beginning a more civilised condition. The life of man, like that of the plant, has a beginning and an end. The beginning of life is under all circumstances simple, both in corporeal structure and in function. Little and weak, naked and helpless, man enters this world not even possessing as much power of resistance as a new-hatched bird.

"Ancient traditions, legends, and historical records agree as regards the origin of tribes and political associations. The derivation of Jewish tribes from nomadic patriarchs, the traditional origin of the Roman empire traced back to the twins suckled by a she-wolf, and many other records of the beginning of peoples and states, are all pervaded by the leading idea of a mighty expansion and higher development from a simple, feeble germ. Just as individuals grow up or perish, so may associations of individuals, under the influence of common conditions, rise or decay. Hence the old historians give to peoples, the origin of which is unknown to them, fictitious progenitors or eponymes.

"Thus, according to the Mosaic genealogy, MADAI is the father of the Medes, ASKENAS the father of the Germans, JAVAN the father of the Ionians, etc. Thus Tacitus tells us that the ancient Germans in their songs attributed their origin to MANN and his three sons. Three chief tribes of the Germans, the INGÆVONES, HERMIONES (or Hermionones), and ISTÆVONES (or Iscævones), are said to have been named after Mann's sons; INGUIO, ISTIO (or Iscio), HERMINO (or Irmino). ISCIO resembles the ASKENAS of the Hebrews, and the ASK of the Scandinavians, a proof of the antiquity of the genealogy, extending from MOSES to the EDDA of the Iclander. We are thus entitled to attribute to the whole human species a development proceeding from the simple to the compound, from a lower to a higher stage. Old traditions and modern researches are in this respect in accord.

"The traditions of old civilised peoples, as well as the narrations concerning existing half savage tribes, are nearly similar. The statements of the Esquimaux and other uncultured peoples differ but little from some of the most ancient records. In most cases the whole human species is derived from a single pair, either created by a divine power, or emanated from it, or grown out from the earth. Commonly woman is represented as having been created last; among the Hebrews from the rib of man, among the Greenlanders from the thumb of the man. Most, though not all records, point to the unity of the human species. Growing development of culture and of mental

progress is frequently indicated, and also a primary perfect state followed by decay. On the whole, the theory of the descent of the human species from a simpler form, and a subsequent development of vital forms and intellectual development seem predominant.

"Modern science, with its incisive researches into the prevalent belief of the peoples, requires, as regards origin and culture, an assumption similar to that generally pervading the traditions—namely, the development of the higher and compound from a more simple root.

"As regards the nature of this *simple root of the human species*, there subsists a wide divergence between old and modern theories. The views concerning the *forces*, under whose influences the development of that root, and the trunk and branches proceeded, differ still more. A meditative dreamy mind sees in everything the power and goodness of Providence; but the cool searching intellect keeps more to the connection of the naked facts; it follows the effects of known causes; it infers from given results recondite but calculable causes, and displays, when it has found what was sought for, faith from the soil which it has appropriated for thousands of years.

"Here we arrive at the old yawning gulf between *believing* and *knowing*, the apple of discord among all highly civilised peoples, culminating in the determination of the question regarding the relation of man to the external world and the first origin of the human species. The greatest difference obtaining between old traditions and the results of modern research, relates to the solution of the question: whether man, as he is, has been *created* by a higher power, outside of the range of still acting natural forces; or whether he was *developed* by a series of normal and calculable natural processes.

"Most traditions of civilised peoples, as well as the legends of half savage peoples, are in favour of the creation of man. The feeling of dignity, the sense of the beautiful, and the consciousness of being separated from the brute, render the theory of creation more acceptable to the vanity of mankind.

"Notwithstanding the unequal struggle with the emotions, the sense of the beautiful and the feeling of dignity, calm examining reason leads us gradually but surely to the development theory. That which has been advanced by *Lamarck* and *Oken* as a mere hypothesis, acquires from hour to hour greater reality, supported as it is by Darwin's argumentation.

"Although the final decision is not yet given, it would not appear to be so far off. No one doubts, at any rate, which theory will ultimately prevail.

"The weight of scientific reason, the observations of similar processes in the present world, and the connection of individual facts, must eventually solve the problem.

"Modern science has still many unsolved questions for explanation. The means and ways are patent, but the means are frequently not within reach, and the roads are long. The question concerning the simple root of the human species first and urgently awaits solution. We are even as yet uncertain whether to derive the whole of humanity



from the self-same human root, or from several roots beneath the human form. The views are divided, the arguments oscillatory; yet the means and ways which may lead to a solution lie before us, and it is not so difficult to determine the period in which the question will be solved.

"Prichard, in the preface to his excellent work on the natural history of man, commences with the following quotation from St. Augustin:—'Men admire the heights of the mountain, the mighty waves of the sea, the high rush of the waters, the extent of the ocean, and the tracks of the stars, and neglect admiring themselves.'"

"At the time of Linnæus the science of man was still so far behind, that this author placed in the same genus 'man' by the side of the various races of mankind, idiotic children grown up in forests, and anthropoid apes.

"Herder, in his "Ideas on the philosophy of humanity," sighs for a mbdern Galen, who would successively compare man with the animals standing next to him, from the first visible beginning through all animal and mental manifestations up to the full development of the brain.

"We are at present somewhat further advanced in the knowledge of the position of man in the external world, and the relations of body and mind. Still we find ourselves entangled in conflicts and doubts, opposed as we are to inherited faith, and in apparent contradiction to the sense of the good and the beautiful. It is, however, vain trying to stifle this inquiry.

"The advantage of the decision will consist in the proper appreciation of the position which the whole of humanity and the individual man occupy in relation to the present and future living world. The decision of this question will also throw more light on the means by which humanity, as a whole, and the people and the state, as well as the individual, may become physically and mentally more perfect. *Knowledge* is also here the basis of *power*."

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#### THE DESCRIPTIVE ANTHROPOLOGY OF PERSIA.\*

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It is difficult, says the author, to determine the population of Persia, as there exist no bills of mortality or birth, nor was there ever a census taken for deducing the number of souls from the number of families and the houses they inhabit which might be ascertained; it would give rise

\* *Persien. Das Land und seine Einwohner: Ethnographische Schilderungen.* Von Dr. Jakob Eduard Polak, ehemaligem Leibarzt der Schah v. Persien, und Lehrer an der Medicinischen Schule zu Teheran. *Persia, the Country and its Inhabitants: Ethnographic Sketches.* By Dr. J. Polak, late Physician to the Shah of Persia, and Professor at the Medical School of Teheran.

to many errors, inasmuch as a family, including servants—slaves that are either purchased or adopted—frequently attains a number of eighty to one hundred souls. On inquiry of several Persians what might be the population of Teheran, an answer is given which varies between 60,000 to 500,000. Still it might be possible to ascertain in the larger cities the approximate number of their inhabitants, as the number of the dead are written down by the *murdashurs* (dead inspectors and washers) for the information of the *kalcemter* (chief of the police). This chief is likewise, from the excise dues and the consumption of victuals, pretty well informed as to the fluctuating population. I could, notwithstanding my endeavours, learn nothing from this man; as regards the population, he answered vaguely, “Shæ'r bessîâr âbâd est” (the city is very populous). Religious prejudice, the fear of the evil eye, appear, as in King David's time, to be the cause of this reticence; hence the numbering of the people, ordered by the Shah to take place in 1859, was violently resisted. This prejudice extends even to the age of a person. On asking a Persian his age, he replies, “already past thirty or forty,” or “*'piremerd em*” (I am an old man). . . .

Taking the area of the present empire Iran, exclusive of disputed adjoining countries, to be about 22,000 square miles (geographical), and assuming 400 to 450 souls to the geographical square mile, we obtain a population of about nine to ten millions. The sight of the vast districts of desert land might induce the traveller to estimate the population at much less; but when it is considered that the northern and western provinces can place in the field 150,000 good soldiers the population must not be estimated too low.

The aboriginal inhabitants (Persians and Medes\*) are rather of a dark colour, never so white as that of the Europeans; the iris is light brown (rarely black); the hair straight (never crisp) and of dark chestnut colour; the beard is thick and well developed; the cranium of a fine oval; the forehead but moderately high and flattened near the temples; the eyes are large, the cornea prominent, and the upper eyelid long so as to cover a considerable portion of the cornea; the eyebrows much arched meet at the root of the nose; the cheeks but little fleshy and without carnation; lips thin; chin narrow; neck never long; the larynx but little prominent; thorax broad and well developed; the hips and the pelvis of females wide; bones thin;

\* The name Persians (Farsi) has been well preserved, but that of Medes is at present entirely unknown in the country, as they have been expelled by the irruption of Turkish tribes. By Farsi are generally understood the inhabitants of the southern provinces, for the Persians call themselves Irans and their country Iran.

extremities well formed; slender about the joints; hands and feet of remarkable beauty; the body hairy. The Persians are rarely very obese; on the other hand they rarely are very lean. I have during my whole stay seen but three fat Persians, who were still not too corpulent to be good horsemen. In stature they are of middle-size: very tall men are as rare as undersized individuals. The features are serious, but never so sharply marked as in the European, for the Persian is not easily excited by mental emotions. He early habituates himself to control the expression of his features; hence the gesticulations of the Europeans astonish him. On the whole the Persian presents in his physical conformation a fine Caucasian type by which he is distinguished from other nationalities inhabiting his country, such as Tartars, Armenians, and Jews. Neither is there anything in his conduct which characterises the Southern and the Semites.

Among the higher classes, and also among the officials and scholars, the so-called *mirza*, *mustāfi* (secretaries), *muharrer* (penman), *munshi* (correctors), as well as the numerous "luxury servants," we frequently meet with characters whose prototype is excellently portrayed in Morier's novel, *Hadjji Baba*. The Persian has invented a peculiar name for them; he calls them *fuzul* and their doings *fuzuli*. The *fuzul* is an individual who can adapt himself to every condition in life, but has constantly an eye to his own interest (*mædâchel*), and understands how to acquire another man's property, or, according to the Persian expression, "to eat it." He is pert and intrusive, and knows all the city news. Crouching like a worm before his superior, he is all presumption in the presence of a subordinate, whom he makes feel his authority. He lies systematically, and only speaks the truth when it brings him any profit. He tries to oppress every one who had been of use to him, as he despises gratitude, and cannot bear the idea of being under an obligation to any one. He is fit for everything, be it a minister of state or a stable groom. He affirms everything he says with an oath; when convicted of a lie, he readily admits it, saying "Gau churdem" (I have eaten dirt). *Fuzuls* of the first water are specially met with in Ispahan; hence Morier very properly has his hero educated there. The last Grand Vizier, Mirza Aga Chan, was a model *fuzul*, so that even the Persians considered him as a phenomenon, and called him *fuzul ibne fuzul* (*fuzul* the son of the *fuzul*). He entered the service of the state under Mehmed Shah. The minister, Haji Agassi, against whom he carried on some intrigues, said of him, "When the Diw of Demawend\* looks down upon the

\* The mountain Demawend dominates the plain of Rages and Teheran. The Diws (evil spirits) were, according to tradition, banished to the Demawend after the fall of the usurper Zahak.

plain of Teheran and sees the Aga Chan, he modestly retires, for he acknowledges having found his master." The European traveller comes in frequent contact with people of this stamp, and feels inclined to extend the caricature of Morier, which paints the character of a class, to the whole people.

Generally speaking, the Persian is covetous, fond of money, and is not over scrupulous as to the mode of obtaining it; but he lightly spends it. He is firmly attached to his family and his tribe, whose fortune or mishaps he shares. Treachery in a family is a thing unknown, and universally despised.

The Persian language, though highly developed, has no words for virtue, gratitude, repentance, honour, conscience. Virtue is usually translated *taekvā*, but this word signifies piety; the word *kunner* does not signify honour, but the capacity for a trade. . . . There are no words for conscience and scruples of conscience; the want of such words prove that these abstract notions have no existence among the Persians. The Persian is not particular about truth. Ever since the poet Sadi sang "A lie for a good object is to be preferred to truth if it excites quarrels," every untruth is considered as a necessary lie. The Persian certainly does not insist on being believed. It is a sort of convention; false coin is received and again expended, whilst no one considers himself as being deceived.\*

The Persian is temperate in his meals, however high may be his position. He is satisfied at times with a meal of bread, cheese, and some vegetables. He is fond of quiet and comfort, but indefatigable and industrious when the occasion requires it. He well supports heat and cold, hunger and thirst. He bears with equanimity fortune and mishaps. If from a mere penman he rises to become a minister, the only surprise he will feel is that he has not obtained that post before, and that he did not know his own talents until they were detected by others. Again, if degraded and dispossessed of his property, he quietly retires to his harem, exclaiming, like Job, "*Kesmet est hemme mâle shâh, umre pādshah, dærâz bâshed*" (It is so destined, everything belongs to the king, long live the king).

The Persian has great power in controlling his passions; his features never betray what passes in his mind; they are a *tabula rasa*. He nurses his wrath until the favourable moment for revenge arrives.

In this respect he follows the maxim of Sadi, who relates: "A dervish who was insulted by a grandee held his tongue, but put a

\* When, not long since, an English diplomatist complained to the Grand Vizier that his words could not be relied upon, he replied, "You may take it as a rule that everything I say is a lie, but what I write may be true."

stone into his pocket. Some time after the grandee was by command of the king cast into a ditch ; straightway came the dervish and cast the stone at his head." Sadi adds the following remark : " Some are of opinion that he might have forgiven him, but every one is at liberty to do as he likes." He also acts on the principle *nil admirari*, or, at any rate, never shows his admiration. He is witty, but illogical in his mode of thought. He always speaks of piety and justice, of his abhorrence of oppression, but whenever he has the opportunity he is the greatest tyrant, and appropriates another man's property without the least scruple. Whenever the king is pressed by European powers he makes his ministers suffer ; these again retaliate on the governors ; the latter on their subordinates, who again oppress the Christians, Jews, and the Gebers.

The Persian, not being sure of the morrow, cares only for the present. The king, like the Chan, builds houses to last only for a few years. The peasant only plants as much and only such trees, the fruit of which he may be able to enjoy within the shortest time.

The Persian is fond of giving entertainments and of theatrical representations, farces, dancing, and fireworks. Being himself a born actor he is a good judge of acting.

He is not inventive by nature, but skilful in imitation. He has a quick perception, learns readily, but then he suddenly stops short, and is satisfied to apply to practical uses what he has acquired. He is attached to his native place, but cares little for his fatherland. By no means fanatical, he desires to be considered as very religious. Two Persians, who when at home never think of saying their prayers, are no sooner thrown together than they immediately begin to show their zeal in religious observances, although they know full well that they deceive each other. The Persian never roundly refuses a request ; he prefers promising without the least intention of keeping his promise.

The Persian is particularly fond of mystery. Every secret society excites his interest ; every new religious sect soon finds many adherents. Thus freemasonry began to spread ; for in Persian it is called *faramush châne* (house of oblivion). The French word *franc-maçon* accidentally resembles the Persian *faramush* (oblivion), hence arose the idea that on entering the lodge a person forgets his former life. After the return of many Persians from England at the time of Mehmed Chan, and lately at the return of the Ambassador Ferruch Chan, freemasonry spread much in Persia, even among the attendants of the Shah. Many Mulas and Seûde were received in the society, secret conventicles were held, and curious scenes are said to have occurred, until the king felt bound to interfere and to threaten the

leaders, some of whom were exiled. Every secret society in Persia is suspected of threatening the existence of government.

The mode of salutation is the same as among other Mahommedans. Unbelievers are, however, not considered worthy of the *salam*, it being a symbolical expression of Islamism; the Mussulman derives *salam* (peace) and *islam* from the same root. Strangers, therefore, are, instead of this salutation, overwhelmed with compliments and inquiries about their health, &c. Insults and curses are rarely directly applied to the individual, but to his family, father, mother, or the grave of his ancestors. The most common insult is *peder-suchte* (thy father was burnt, i.e., he was a heathen), and *peder-sek* (thy father is a dog). The insults applied to women are too obscene for translation. The Persian generally swears by the head of Ali, Mohammed, the Shah, &c.; he repeats Wallah, Billah, Tillah. Most, however, of these solemn asseverations come to the account of his partner in conversation; hence the oath *besære shumâ* (by your head) is mostly heard. The Persian makes no particular motion with his head as an affirmation, but no he expresses by moving the head upwards and backwards, at the same time contracting his lips. His wrath he generally expresses by the formula *la illah il Allah*; his admiration and applause by *bârik-allah, â ferin, hæzâr, â ferin, mash-allah* (bravo, thousand bravos).

*The Turco-Tatar Race.*—The skull of this race is, compared with that of the Iranian, less oval, the eyebrows less arched, not meeting at the nose; the eyelids are thicker; the iris brown; the nose short and thick, both at the root and the wings; the cheekbones and the chin are broader; the lips more fleshy; the extremities coarser; and the skeleton more massive; the stature is generally higher than that of the Persian.

The Turco-Tatars approach in character the Osmanlis (inhabitants of Turkey). They are not so crafty, but braver and more resolute; hence all soldiers are taken from this race. They despise the Persians as cowards, and are proud of their Turkish descent. The contrast existing between these two races induces the Government to send the Turkish regiments into Persian districts, especially into Ispahan and Shiraz. The Turk never learns to speak the Persian language perfectly; instead of *u* he always pronounces the French *u*.

*The Kurds* are a fine stout race of men. They differ as regards the colour of the eye, skin, and hair so little from the northern, especially Germanic races, that were it not for the customary dyeing of the hair and their oriental dress they might be taken for Germans. They speak a peculiar dialect, which belongs to the Iranian family of languages. They are subject to a governor (Wali), who is appointed

by the Shah. The dignity is nevertheless hereditary in the family, which boast of their descent from the Sassanide princes. The residence of the Wali is in the little town called Senne. The Kurds are brave, but noted robbers; still they are hospitable, candid, and trustworthy, hence the present Shah confides the protection of his person and of his family to a Kurdish general—Adshutan-Bashi Azis Chan.

*The Armenians* are distinguished from the Persians by a fairer skin, full cheeks, finely coloured in youth, a massive skeleton, and a predisposition to obesity, which is seldom seen in the Persian. The women especially become very corpulent. The beard is weaker than in the Persian; the eyebrows less arched and bushy; the hair on the head brown, and in early youth of a lighter colour.

The number of Armenians and their former wealth is now much reduced. Tatus Chan, the Armenian Bishop in Ispahan, assured me that the number of souls of his bishopric, extending from Java and India to Kafan Kuh in Persia (between Irak and Azerberdshan), amounted to only 20,000; to which must be added a small number of Roman Catholic Armenians and some hundred families in Tabris, which belong to the Bishopric Utsh Mazin. Most live in Ispahan; at present only 400 families, instead of the 12,000 at the time of Chardin; some live in Tabris and Teheran, and a few families in Shiraz and Bender-Busher.

*The Jews.*—Despite my endeavours to learn something about the history of their immigration, I was unsuccessful, since they possess neither historical nor traditional documents. Once only, a Jew brought me an historical work, which turned out to be only a manuscript translation of Josephus Flavius. They were once, at the time of the Sassanides, very numerous and powerful in Southern Persia. They occupied large districts and populous towns; but were, by oppression and persecution, so much reduced that, as the Jewish scholar Mula of Hamadan assured me, the number of Jewish families in Persia now amounts only to 2,000 families. They form three large communities in Shiraz, Ispahan, and Katshan; smaller ones in Teheran, Demawend, Balafrush, and Kazeran; some live scattered in Kurdish villages. The large Jewish congregation in the great place of pilgrimage, Meshhed, separated in consequence of a disturbance caused by the priests, which threatened them with extermination. Many ostensibly embraced Islamism, but form even now a secret Jewish congregation; others fled to Herat. The supposed conversions of the adventurous missionary, Jussuf Wulf—so is the Rev. Joseph Wolf called in Persia—are fabulous. The poor missionary was willing to be deceived. From insufficient knowledge of the



Persian language he took absence of opposition for consent, *ergo*, for conversion. Mula Meihdi, of whose conversion so touching an account is given in his book, wrote to his co-religionists in Teheran that there was not a word of truth in it.

The Jews speak a *patois* intermixed with old Persian. They are, moreover, the only race in Persia using hissing sounds, which the Persian is quite unable to produce. They gesticulate much with the hands and the facial muscles, which the Persians avoid, as they wish not to betray their emotions.

There are among the Jews here two types: the pure Arabic, with fine aquiline noses, black and piercing eyes, and handsome extremities; and a race, which in remote times crossed with Chamites, with thick noses and crisp hair, frequently resembling negro hair. Climate and social conditions do not seem to have influenced them much, so that they can scarcely be distinguished from Jews in other countries.

Their laws are the same as among other Sephardim-Jews, only that polygamy is permitted, of which, on account of the oppressed condition in which they live, little advantage is taken. They celebrate the same festivals; the Purim festival is also accompanied with the knocking at the mention of the name of Haman. The books of the Law are copied and preserved with the same formalities as elsewhere. There are enthusiasts amongst them who fast from three to seven days.

They support themselves by silk-spinning, glass-grinding, jewellery work; they manufacture alcohol, brandy, ammonia, muriatic and sulphuric acid; they understand chemistry, and are employed in the Mint. Many are renowned physicians; one of the physicians in ordinary to the late Shah was a Jew named Hakim-Dāza. They enjoy also a reputation as good singers and musicians; hence they are frequently invited to entertainments.

The only national monument the Jews possess in Persia is the grave of Esther in Hamadan, ancient Ecbatana, whither they perform pilgrimages from time immemorial. In the centre of the Jewish quarter there is a small building with a cupola, upon the top of which a stork has built its nest. The entrance is walled up, excepting a small aperture at the bottom, through which a man may pass crouching. This leads to a low ante-chamber containing many inscriptions of the names of pilgrims, and also an inscription of the year of the restoration of the chapel. This ante-chamber leads to a small square room, with a few narrow windows admitting but little light, which contains two high oak shrines, ostensibly the monuments of the graves of Esther and Mordecai; round about them are, in Hebrew, written the verses of the last chapter of Esther, and also the names

of three physicians, at whose expense the grave has been restored. There are many reasons which speak for the genuineness of the Esther tradition and this grave.

*The Gebers* (Guebers), or Zerdutshi, *i.e.*, Zoroastrines as they call themselves, are now found only in small numbers in the towns Yezd and Kirman. Looked upon as idolators, they would long since have been exterminated if they were not in possession of a charter given to them by Caliph Ali (preserved in the city of Yezd), and were under the protection of the Indian Parsees. The latter send them annually considerable sums to satisfy the extortions of the governors; for they are very anxious that a remnant should be preserved in the mother country to keep up the sacred fire; hence they endeavour to prevent total emigration. The Gebers enjoy a good reputation for industry and honesty; they are the intermediators of the Indian trade, and have their own caravanserais in Teheran, Ispahan, and Shiraz. Their number amounts to about 8,000 to 9,000.

*The Turkomans*, or Mongols of pure blood, natives of Turkistan, hostages from the tribe of the Goklans, but few are to be seen in Teheran. They are distinguished by a yellowish skin, broad cheekbones, broad forehead, oblique small eyes, broad nasal root, so that the eyes appear to be with it at the same level, and long, thin moustaches, and the absence of whiskers. Being hostages, they receive from the government a small pension. They are also farriers, and manufacture beautiful horse-cloths. Their life is singularly associated with that of the horse, for which they manifest a decided predilection. I have seen Goklan children, eight to ten years of age, riding high Turkoman steeds; swiftly galloping along, they grasp the horses around the neck, and caress them. Many inhabitants of Khorassan present all the marks of being cross-breeds of the Turkoman race. According to official accounts, there were, in 1855, in Persia 22,475 Turkoman families, or, more correctly, tents of the tribes Jamut, Goklan, and Tekkeh.

*The Afghans*, of the purest Caucasian race, are recognised by their high stature, vigorous body, intellectual physiognomy, large eyes, and firm step. Their number is but small, and, as refugees, they receive a stipend from the Shah; hence the people give them the nick-name *mushe-chazineh*, *i.e.*, the mice of the treasury.

*The Belooches* are only here and there found as slaves, and approach the Hindoo type. Crosses of Iranians and Belooches are frequently met with, especially at Sistan.

*Gipsies* (Kauli Karatshi) are met with as wandering tribes in many parts of the empire. They perfectly resemble their European cognates in physiognomy, habits, and mode of life. They are dancers, musi-

cians, and fortune-tellers,\* and also farriers, tinkers, and form separate tribes (ils) under Nomadic chiefs. They are, besides, considered good runners, hence all shatirs (runners) of the king belong to this race.

*The colony of Europeans* consists, exclusive of embassies, consulates, some merchants (French, Greek, German, Swiss, and Russians), and some foreign officers and physicians in the service of the shah, on the whole of scarcely more than one hundred individuals. They live in Tabris and Teheran; three families are in Resht, and one family lives in Shiraz. The European finds no home here; he is in a state of isolation, and is shunned by the natives. There is no case known to me that a European adopts Persia as his second fatherland, as is the case in Egypt and Turkey. Cut off, by the difficulty of communication, from the civilised world of Europe, and separated from the female population by law and custom, so that he rarely sees an unveiled face, the character of the European, who is obliged to remain here, undergoes a change; he loses his energy, becomes unsocial and peevish, even with his fellow European sufferers.

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## BROCA ON ANTHROPOLOGY.

[*Concluded from vol. v, page 204.*]

IN order to give an idea of the complexity of certain questions of general anthropology, and to show how they may be solved by the analytical method, we shall, as an example, select one of the most controverted subjects, and search for the cause of the numerous varieties observed in the Indo-European races.

Linguistics have established the fact, that nearly all the peoples of Europe, America, Persia, Cabul, Beluchistan, Hindustan, speak dialects of the same primitive language, the common mould of the Zend and the Sanscrit. It has hence been concluded that a primitive people, issuing probably from a region to the north of Persia, had sent colonies and extended its branches on the one side to the borders of the Ganges, and on the other to the shores of the Atlantic—without speaking of recent migrations, by which the European races and

\* Dr. Cloquet related to me:—"During my stay in the Royal Camp at Sultanieh, a gipsy woman came up to me to tell me my fortune from a large printed sheet; I immediately perceived that it was a number of the *Journal des Debats*, which I afterwards heard was presented to her by General Terrier for some service she had rendered him."

languages have spread in the New World, Australia, and many other regions. Here we have a fact well established.

At the time when the Indo-European peoples first set foot in Europe, they did not find that region altogether deserted; it had been occupied before their arrival by an autochthonous population. There are still found, at the two extreme ends of Europe, the Basques and the Fins, whose languages are incontestably derived from these autochthones. But elsewhere there remains neither in the language nor in the traditions any trace, any remembrance, of a people prior to the arrival of the Indo-Europeans, so that the existence of these primitive peoples might be doubted if their crania had not been discovered in the turf-pits, in the graves of the stone period, in the ossiferous caves, and in the diluvium. This decisive testimony supplies the silence of history. Here, then, is a second fact now generally accepted.

This being granted, the Indo-European peoples, considered by the incontestable filiation of their languages as issued from one and the same race, present considerable differences. Some are dolichocephalic, others brachycephalic. They are tall or short, have very fair or very dark complexions, with all intermediate shades, from the Scandinavian, with his blue eyes, his pale hair, his white skin, to the Hindoo, with black eyes and black hair and a bronzed skin. Finally, these peoples differ in manners, taste, aptitude, industry, art, literature, science,—in their religious tendencies, their politics, at least as much as in their physical characteristics.

In order to explain these differences of stature, of cephalic type, intelligence, etc., several hypotheses may be advanced, based upon the various conditions to which the different branches issued from a common stock have been subjected in the respective regions to which they have been transplanted. Each of these migratory peoples has several times changed its abode, climate, social condition, alimentation, and mode of life. Some have remained for a long time or are still in a semi-barbarous state. Others have been civilised from the highest antiquity. All finally have, from the first, found themselves in the presence of autochthones, whom they have vanquished, displaced, denationalised, destroying their language and history, casting their very nature into oblivion, but whom they certainly could not have exterminated all at once.

Temperature, hygrometric conditions, altitude, alimentation, mode of life, industry, civilisation, and intermixture of races—all these influences taken separately or by the combination of some of these, have given rise to numerous hypotheses, in order to explain the actual diversity of the Indo-European peoples.

The fair complexioned Scandinavians, living in a cold country, and the bronzed Hindoos living in the torrid zone, has at first led to the supposition that the differences of coloration depended on temperature. But the Rohillas of Hindustan have a white skin, blue eyes, fair hair; whilst men with dark eyes and dark hair form the majority in certain districts of Ireland, Wales, and the Scottish highlands. The Gipsies, who came from India and spread over Europe since the 12th century, have in the cold countries, even to the Cheviot Hills, preserved the tawny complexion and the black eyes and hair of the Hindoos. The German colony in Paraguay, founded in the fifteenth century by the soldiers of Charles the Fifth, having remained pure by non-intermixture, presents a parallel instance of an Indo-European people remaining as fair under the tropic of Capricorn as on the banks of the Elbe.\* Consequently, if there exist brown or fair Indo-Europeans, it does not depend on temperature. In reviewing the other climatic conditions, we find in the same way, by numerous examples, that they are incapable of producing the result in question.

We then arrive at influences of another order, which have not been considered as influencing the coloration, but which appeared to explain the variations in stature and muscular force. These are alimentation, mode of life, and subsidiarily industry, which leads to comfort. Two hypotheses are here face to face. It has been admitted that the social condition—that is to say, civilisation—by affording regular subsistence, abundant alimentation, gradually tends to increase both the height and physical force. Or, on the contrary, it has been admitted that civilisation, being unnatural, tends to develope the mind at the expense of the body, and in course of time renders man weaker and shorter. Both these hypotheses rest upon a certain number of facts, or rather coincidences. Thus the Græco-Latin people, civilised before the Germans, Scandinavians, and Slavonians, are shorter than the latter; but the Bas-Bretons are shorter than the Belgians, the Normans, and the Provençals, who have been civilised long before them. Many other facts might be cited in support of either of these hypotheses, which mutually destroy each other. It does not result from this that the conditions of existence have no influence upon stature; but thus much results, that the variation in stature of Indo-European peoples cannot be explained by these conditions.

It has finally been supposed that the variations of the cephalic

\* A similar Spanish family, remaining perfectly fair and purely Gothic, from non-intermarriage with darker types, and in position and rank holding for centuries official supremacy, is to be found in Yucatan at the present day.—ED. ANTH. REV.

type constituting brachycephaly and dolichocephaly might depend on intellectual culture ; that the brain might, like the rest of the organs, be developed by exercise ; that the most active organs of the brain might become more developed than the rest ; and that consequently the degree and the nature of civilisation might modify both the volume and the form of the cranium. But, on the one hand, in taking a general view on the subject, we find that there subsists no relation between the brachycephalic and the dolichocephalic types as regards the intellectual value of races. The Teutonic races which occupy the first rank in the human series, are dolichocephalic, like the Ethiopian and Australian races, which stand last. Brachycephaly belongs to the Slavonians, the Turks, the Mantchoos, the Papuas, and numbers of other peoples occupying all degrees of the scale, without including the present French and South Germany, which are on the average nearly brachycephalic. On the other hand, from a special point of view of the Indo-Europeans, we find that the Scandinavians are more dolichocephalous than the Hindoos ; these, again, are more so than the French ; and that no relation can be established between the cephalic type of these different peoples and their civilisation either in the past or the present.

Having thus passed in review all these influences, and recognised that none of them explains the variations produced in the Indo-European nations, we arrive, by way of elimination, at another hypothesis which, without pretending to be rigorously demonstrated, possesses at least the advantage that it better explains all the facts and meets all objections. The existence of a primitive, or at all events an anterior population, at the arrival of the Indo-Europeans, has been established by human palæontology wherever persevering researches have been made. Among these aboriginal populations some were brachycephalic, others dolichocephalic ; some were tall, others were short. The intermixture of the conquerors with the vanquished naturally explains all the variations in stature and cephalic type. Palæontology teaches us nothing as regards the colour of the eyes and hair of the aboriginals ; but these have not altogether disappeared, and where they still exist, as in Hindustan and the region of the Pyrenees, they present, in reference to these characters, the greatest analogy to the Indo-Europeans adjoining them. All this is explained by the intermixture of races. The Indo-European idioms imported by the conquerors have prevailed over the indigenous languages, and have alone survived ; but the indigenous people have not, for all that, disappeared. Although losing their language, their name, their nationality, they have not ceased to exist. The complete extermination of one race by another race is a phenomenon nearly impossible,

considering the condition in which the immigrant peoples found themselves. The intermixture of blood was an inevitable consequence of these immigrations, and, in proportion to the numerical preponderance of either race, the cross-breed resulting from this intermixture approached more or less to the indigenous or the foreign type. Nothing more is required in order to understand the diversity of the physical characters of the peoples now speaking the Indo-European idioms; and this theory of intermixture explaining all the facts, and being open to no objection, presents itself invested with every scientific probability.

This rather long digression seemed to us necessary, in order to show, by a very complicated example, how the analytical method may be applied to the study of anthropological questions.

The preceding example has, moreover, shown that great difficulties arise from the great diversity of intrinsic or extrinsic conditions amidst which the races under examination find themselves. All the characters they present are not of equal importance; some are more, others less, significative. If all tended in the same direction; if all the peoples of the same colour possessed the same stature, hair, cranial conformation—the same degree of intelligence, the same inclinations, the same language; if all of these were under the same, or at least a very similar climate; if all had at the same, or nearly the same, epochs arrived at the same social level—the task of anthropology would be an easy one; but it is not so. The anatomical, physiological, psychological, climatic, and other facts combine and cross each other in a thousand ways. One character establishes an approximation, whilst other characters establish profound differences; and there result from this, continual contradictions, which, however, are and must be only apparent, and which will disappear when the whole truth becomes known, but which hitherto have given rise to difficulties and dissidence.

The naturalists also have had to contend with difficulties of the same nature, and if, after many failures, they have succeeded in giving to their science a positive character, it is because they have recognised the necessity of adopting a principle of co-ordination secured from the inroad of fancy. This principle is that of the subordination of character. This is not the place to expound it, to demonstrate its value, and to teach its applications. No one, moreover, ignores that it is one of the most essential bases of the natural method.

The aim of the anthropologist should be to apply as much as possible to his science the principles of the natural method, a proposition which requires no demonstration. But among the characters diversifying the human group there are some which properly belong to it,



or are only found in a rudimentary state in other zoological groups. The particular considerations, according to which the naturalist establishes the subordination of characters, are thus insufficient for the anthropologist. In the presence of anatomical or morphological facts, whose relative value notably differs in the various degrees of the animal scale, there are other characters of quite a different order claiming a place which must be determined. When we consider that man is distinguished from other animals more by his intelligence than by his physical form, we can easily understand why some anthropologists have, in the classification of human races, assigned the first rank to psychical characters, by which humanity has acquired domination on the globe, and to assign the second place to physical characters, by which man so nearly approaches the anthropomorphous apes.

But the question should not be put in this way. Here it is not the question to distinguish the human genus from other groups, but to subdivide it into secondary groups as clearly defined and as natural as possible. It is necessary to base this division upon what is most fixed in the organisation of man, upon that which most resists the influences capable of modifying the individual or the race. Now, it is unquestionable that the physical characters are more permanent than the others, and that, consequently, they deserve the preference.

No doubt, languages, manners, industry, religion, all kinds of aptitudes, establish profound differences between the various races of mankind. But these characters, the study of which is as interesting as it is important, become frequently modified by circumstances, and may vary considerably in peoples of the same race. We cannot therefore assign to them any supremacy. There is, nevertheless, one which deserves special attention, and which plays a principal part in a great number of anthropological questions; so much so, that some others have felt justified in making it the almost exclusive basis for the classification of races. We speak of language. Linguistics render the most marked services to anthropology. Two peoples belonging to different races are separated from each other by several thousands of miles; they are so much strangers to each other that, neither in their respective histories, nor those of other peoples, is any mention found of their original parentage, and yet these peoples who have never heard of each other speak very similar idioms. The words are not the same, but the roots are. The grammar is nearly the same, and it becomes certain that these two languages had the same origin; consequently, the peoples speaking that language should, despite their actual dissemblances, have had common ancestors. On the other hand, there are two groups of races, which, since the origin of history, have always moved side by side, who have more than once intermixed,

who have interchanged their civilisation and religion, and who, as regards physical characters, present no very marked differences; such are the Indo-European and the Syro-Arab, improperly called Semitic, races. Now, despite their vicinity, their similarity of type, and various intermixtures, despite the fundamental community of facts, despite more or less durable political fusion, these two groups of races speak languages so distinct that the most eminent linguists have despaired of reducing them to a common origin. (See Renan, *Histoire Générale et Système comparé des Langues Sémitiques*. Paris, 1858.)

These inverse examples show the importance furnished by linguistics. These characters present, besides, a remarkable permanence. The *spontaneous* modifications introduced in the course of generations, either in grammar or words, however great they may appear, are of but a secondary order, the primitive type of the language continuing to subsist. This has been the case in all cases scientifically known; and these spontaneous modifications of words and grammatical forms constitute a sort of evolution subject to certain laws.

The linguistic characters have hereby acquired such a degree of precision that it has become easy to establish in languages methodical divisions and subdivisions, to distinguish a certain number of trunks dividing in primary, secondary, etc., branches, and thus to institute a taxonomy as regular, as positive, and as complete as that based upon physical characters. We may state here at once that in many cases the groups based on linguistics coincide pretty nearly with the groups based upon the anatomo-physiological study of human races. But when these two orders of research lead to contradictory conclusions—as we have seen in the example of the variations of physical characters in peoples speaking the Indo-European tongues—it then becomes necessary to choose between the evidence of direct observation and that of linguistics, and to subordinate the characters drawn from language to those drawn from organisation, or *vice versa*. Naturalists readily give the preference to the latter; linguists place the former in the first rank. In order, then, to give to these difficulties a scientific solution, it becomes necessary to establish, on positive considerations, the relative value of the two orders of characters.

Every one admits that the distinctive characters of the races of man acquire value in proportion to their permanence. This is a general principle of natural history, and is also that of linguistics. The question, therefore, is whether the organisation of man is more or less permanent than his language. This question would not arise if the absolute and continuous immutability of the physical type were completely demonstrated. It is clear that languages become modified in

time; if immense researches were required to discover the affinity and the filiation of the Celtic, Hellenic, Latin, Germanic, Slavonian, Persian, and Hindoo languages, it is because fifty or sixty centuries have so greatly altered them. Neither the Italian nor the French peasant understands the Latin tongue, which their ancestors spoke twelve or thirteen centuries ago, and it is more than two centuries since the language of Sire de Joinville, the companion of St. Louis, has become unintelligible to most Frenchmen. These modifications may be slight, but they correspond with very short periods; and besides, however slight they may appear in the eyes of linguists, they are palpable and evident, and they become even considerable from a political point of view; for the primary condition of a political solidarity is unity of language.

Linguistic characters are therefore not absolutely permanent. The limits of the changes they may undergo are as yet not strictly determined. These are essential features, fundamental characters, which, in all known cases, have maintained themselves without alteration in all languages from the same stock; and nothing has hitherto confirmed the hypothesis of unitarian linguists, who, in order to conciliate the actual state of things with the idea of one primitive language, have supposed that the type of languages may, within a number of centuries, undergo a total transformation. But whilst the limits of a spontaneous alteration of languages are as yet undetermined, one point is sufficiently established, that these limits are of great extension.

The question of the permanence of physical types is not less controverted than that of linguistic types. The Darwinists assume that all animals, including man, are derived from a small number of simple beings, possibly from a primordial monad; the Monogenists, with much less boldness, are of opinion that all human races are derived; if not from a single couple, at least from a certain number of primitive men perfectly resembling each other. The Polygenists finally assert that human types are only liable to slight modifications; that the chief physical characters are permanent; and that, consequently, the actual diversity of races can only be attributed to the multiplicity of their origin.

Here, as in the preceding case, the divergence of opinions is in proportion to the duration of the intervening time. When we hold to the period of time of which we possess historical, archaeological, or anatomical records, it is found the types of races are permanent, or rather that they have not appreciably changed in races who have not intermixed, and even in such as have more or less crossed. But when, on the other hand, we consider that the few thousand years to which our history extends in the life of humanity is an extremely

short period, we may admit, if not as demonstrable, at least as quite possible, that the modification of types, too slow and too slight to be perceptible after five or six thousand years, may, after lapse of two or three thousand centuries, have affected the different races issued from one primitive stock.

Finally, if we plunge further into the unknown past, and count by millions of years, we arrive, with the school of Darwin, at conceiving the possibility of a universal brotherhood, not merely with negroes and Australians, but with apes, fishes, molluscs, and zoophytes.

From these discussions concerning origin, emerges a perfectly positive fact—namely, that physical characters are but little variable, and though they become modified under a prolonged influence of media, the process is extremely slow. Upon the ancient monuments of Egypt, nearly four thousand years old, there are representations of Negroes, Jews, Greeks, Mongols, Hindoos, and of natives. All these types were as distinct then as they are now. Since then they have not changed perceptibly, whether in the Valley of the Nile, the adjacent districts, or in distant regions where the conquering Egyptians penetrated. The celebrated cranium of New Orleans, found in a deep bed beneath a series of cypress forests, successively submerged by the alluvia of the Mississippi, presents the actual type of the indigenous race of South America. All the efforts made to reduce the antiquity of this cranium have failed to make it less than fifteen thousand years. The present type of the red-skins did thus exist at least one hundred and fifty centuries ago; it has not changed since then, and yet, during a period not half so long, the Indo-European languages have become so much modified as to be scarcely recognisable.

These facts, which might easily be multiplied, do not pretend to establish the *absolute* permanence of the physical types. There is a change which escapes us, because of its slowness, but which might become apparent if the observation could be extended to periods eight or ten times as long. What we here wish to establish is the relative degree of permanence in physical and linguistic characters, and there can be no doubt that languages—the work of man—are much less stable than organisation—the work of nature.

If, therefore, instead of considering the gradual mutations which supervene *spontaneously*, from century to century, in all languages not fixed by a strong literary organisation, we consider the most rapid changes effected under the influence of political and social circumstances, we see radical transformations, complete substitutions, resulting in the disappearance of a language, without those who spoke it ceasing to resemble each other in every other respect.

The Cornish, a Celtic dialect spoken up to the middle of the eigh-

teenth century, has gradually been supplanted by the English language. In the same way the French is superseding the *patois* of the south. May be that not a century will elapse before all the *patois* dialects have become dead languages. The Breton dialects, Celtic idioms of the ancient province of Brittany, are already banished from Lower Brittany, and will certainly, sooner or later, be displaced by the French language; and the Basque, finally, which most linguists consider the oldest of all known languages, will, no doubt, disappear in its turn: for this language has, for a century past, lost much of its territory. On the two slopes of the Pyrenees, French and Spanish are already spoken in all important towns; in many villages they begin to displace the Basque, and it requires no prophetic power to foresee that ere long they will penetrate into the hamlets.

These substitutions of languages proceed slowly in time of peace, without any intermixture of races, by the simple effect of political conditions and education. The new language first reaches the higher and then the middle classes. The peasant is in his turn obliged to learn it, and the old language becomes gradually extinct. These facts occur daily around us, in proportion as modern nationalities become consolidated; and thus it happened many a time, both in the past and the present, that numerous populations, nay, entire peoples, have ended by exchanging their languages without experiencing in their physical characters any serious modification. It is true that more frequently the substitutions of languages have been produced by political catastrophes, immigrations, or conquests. Conquering peoples have been known, in course of time, to impose their language on the vanquished; on the other hand, the latter have also maintained their languages, whilst the foreign conquerors forgot their own. In either case, both populations become, sooner or later, inevitably fused, and there arises a mixed population which takes more or less after either of these races. This intermixture of blood always takes place in unequal proportions. The physical type alters at first in proportion to the intensity of the intermixture; then the hybrid race tends, in the course of generations, to return to the type of the most numerous mother race. The physical characters which survive the intermixture, with more or less purity, are those which belonged to the numerically predominant race, whilst, on the contrary, the surviving language is frequently that of the less numerous race. There is thus no parallelism; there is even an apparent contradiction between the linguistic fact and that of anthropology proper.

It results from this somewhat lengthy exposition, rendered necessary by the pretensions of a certain school, that in anthropology the

characters of the first order must be taken from the study of the organisation.

In other words, when there is a contradiction between linguistic and physical facts, the preference must be given to the latter. Linguistics are, nevertheless, most precious auxiliaries of anthropology; but the furnished information cannot be looked upon as a decree. The results of philology are positive; they even possess a degree of precision, certainty, and simplicity rarely found in the study of physical characters; but these results once acquired require interpretation, which the anthropologist only is able to give with any certainty.

The principle of the subordination of characters must now be extended to various physical characters. They are not all of equal importance, nor have all of them the same degree of permanence; but this degree of comparative permanence is as yet not sufficiently determined to make it the object of a methodic subordination. It cannot be done without the assumed solution of a number of contested questions. We must thus confine ourselves to consider the characters with regard to their own importance. Now, whether taking a purely zoological or a physiological stand-point, we are authorised to rely upon the relative characters of the skeleton of the head as more important than all the rest; and it is for this reason that Isid. Geoffroy Saint-Hilaire bases exclusively upon the study of these characters the determination of the four grand types around which he groups all the human races, distinguishing after these the secondary characters, such as the colour of the skin, the nature and implantation of the hair, the shape of the nose, the direction of the eyes, etc. (*Isid. Geoffroy Saint-Hilaire, Sur la Classification Anthropologique et sur les types principaux du genre humain, in the Mémoires de la Société d'Anthropologie, tom. i, p. 125-144. Paris, 1860. 8vo.*)

There now remain characters of a different order, which no doubt are connected with organisation, with the cerebral constitution of races, but must not be confounded with organic characters. We speak of aptitudes intellectual, moral, and social. There exist races eminently perfectible, who enjoyed the advantage of outstripping all the rest, and engendering high civilisation. There are, again, some who have never taken the initiative in progress, but who have accepted or adopted it by imitation. Others, finally, have resisted all the efforts made to rescue them from a savage life, thus proving the unequal degree of *perfectibility* possessed by the various races of mankind. A character so important as this, the consequences of which were enormous in the past history of humanity, as they must

be in the future—is this character subordinate to those of the eyes, skin, or hair?

We have no hesitation in replying, yes. Perfectibility is one of the most interesting elements in the study of races, but it is impossible to constitute it an element of classification. Perfectibility is not a simple faculty, it is only a result, being a manifestation of a congeries of intellectual faculties. The absence of perfectibility does not indicate the absence of these faculties, but only their impotence in mastering the inclinations and instincts which maintain man in a savage state; and according to external circumstances, difficulties or facilities of existence, mildness or rigour of the climate, more or less, call forth efforts of intelligence; so will people of the *same race*, and consequently endowed with an equal degree of perfectibility, manifest the latter in a manner extremely unequal. An infinite number of centuries have elapsed before the first civilisation of humanity; and Egypt had already reached a high degree of splendour, whilst the whole of Europe was still plunged in the darkness of profound barbarism. Perfectibility, although inherent in the primordial organisation of numbers of races, may thus remain latent during an indefinite lapse of time before it manifests itself; and when a people presents itself before us in the most abject intellectual and social condition, we must ask ourselves whether this people is really refractory to progress, or whether it only requires for its elevation from a savage state a concurrence of favourable circumstances. The solution of this problem is not always possible. There are cases in which the past is of such a nature as to leave no illusion as regards the future. Never has a people with a black skin, woolly hair, and a prognathous face, spontaneously arrived at civilisation. The African negroes, which are far from occupying the last rank in the human series, have never been able to give to their societies the stability which is the essential condition of progress, and there has never been seen a government uniting into nations the savage tribes of Australians or Pelagianin negroes (or Melanesians). But by the side of these examples, which unfortunately are too clear, there is a considerable number, the interpretation of which, doubtful now, may perhaps remain doubtful for many centuries to come. Perfectibility is, therefore, not one of those characters which necessarily result from the study of a race. It should occupy a large place in the study of the anthropologist; but it is too difficult to be determined—it is connected with elements too variable and too complex to make it intervene as a general term in the characteristics of races. And what we say of the ensemble of the qualities and faculties which preside at the organisation of societies and the birth of civilisations, applies more



strongly to special industrial, political, artistic, literary, scientific, religious, or other aptitudes, when determining the form of each civilisation.

In the preceding exposition, by descanting on the method and essential principles of general anthropology, we have at the same time glanced at or indicated a great number of questions which belong to its domain. We have no intention of exhausting our enumeration of the subjects of study, but we deem it our duty to touch upon some which, either by their scientific interest or their practical importance, deserve particular attention. We do so for the purpose of showing the concatenation of certain anthropological questions.

The investigation of origin, taking this word in its absolute sense, pertains not to science; for beyond observed facts, beyond more remote facts discovered by way of induction, and still more remote ones which are only approached by hypothesis, there still remain, and ever will remain, primordial facts in the presence of which hypothesis remains dumb and powerless. Scientific research in such cases, according to the nature of the mind, yields its place to philosophical doubts or to faith. The Darwinian hypothesis, the boldest which can be cited, carries back the problem of origin to the apparition of the first monad; but the fact of the first transition of inorganic into organised matter, which can neither be explained nor divined, is beyond the extreme limit of what can be known, for it is only a play of words to say that matter has the property of organising itself when it finds itself placed in favourable conditions.

The hypothesis of Darwin on the origin of species forms no essential part of anthropology, yet it is inseparable from the research concerning the origin of man, or rather the human type.

Anthropology proper embraces, in the history of the globe, only the human period; and the first question that presents itself is that of the antiquity of the human species. The time is past when the age of humanity was computed by years. Man has left traces of his existence, marks of his industry, and remains of his body in geological strata, the antiquity of which is beyond computation. He has lived in epochs when the Flora and Fauna considerably differed from those at present existing; he was the contemporary of a number of species now only existing in a fossil state; and whosoever has formed an idea of the slowness of such changes effected on our globe, will easily convince himself that six thousand years constitute but a short moment in the life of humanity.

Human palæontology enables us to solve in a decisive manner a problem which has at all times occupied and divided the mind. Creeds spread amongst many peoples, represent the first men as superior in

strength, beauty, intelligence, virtue, to their degenerate posterity, and under various names assume a golden age of the dawn of humanity; whilst on the contrary many philosophers look upon the primitive ages as periods of profound barbarism and savagery. The latter opinion irresistibly flows from the study of the most ancient relics of the existence of man. What mythology has called the golden age is now called the stone age. The stone age is that long and dark period in which the use of metals was unknown. The first men lived in small wandering tribes, inhabiting caves, and possessing no other arms than fragments of flint, which they knew not even how to polish. At a period infinitely nearer to us their primitive industry became gradually more perfect. They learned to polish flint weapons, and fabricate rude pottery, to work bones of the stag and of other large animals into arms or other implements. The use of metals constitutes a second period. Copper, and bronze (an alloy of copper and tin), were the only metals known during many centuries, constituting the Bronze Age. Then came iron, a metal incomparably more powerful, but more difficult to extract and to work, which supplanted the former. From the period of the Iron Age, man, provided with irresistible instruments, was enabled to till the ground, to destroy the large animals, cut down the forests, build cities, and form nations. That hard metal which, in the language of the ancient poets, symbolised human perversity, characterises, on the contrary, in the eyes of modern science, the third age of industry, security, stability, and true civilisation. It was thus by an extremely slow progress that man gradually rose from a savage to a barbarous state—from barbarism to civilisation. This evolution, the different phases of which are described by archaeology and palæontology, is still observed in inferior or less advanced races.

The antiquity of man once established, the obscurity surrounding the origin of humanity becomes still deeper as we penetrate the depth of time. Two doctrines, as old as the most ancient traditions, are brought here face to face. Many peoples of antiquity considered themselves as offsprings of the soil which bore them, and rejected all idea of parentage with foreign races; others, whose belief has become an article of faith among the greatest modern nations, make the whole human species descend from a single pair. These two doctrines, separated, as must be well understood, from its theological element, which must remain foreign to scientific research, are known in anthropology by the names of *polygenism* and *monogenism*. The questions allied with them are numerous and important. The first is that of *permanence of types*, of which we have already said a few words. The problem is to know whether the external modifications produced by the action of the media may induce in the physical characters serious

and definitive changes, and whether, in consequence of such changes, become hereditary, types so differing as the Ethiopian and the Caucasian types may be produced in peoples derived from the same stock.

This question of the origin and formation of races comprises a number of subjects which we shall merely enumerate. The historical documents not always possessing the desirable precision, and direct observation being impossible, analogy is appealed to, and documents are borrowed from zootechnics, more or less relative to the natural or artificial formation of races of domestic animals. But the data derived from this study can only be applied to man with the greatest reserve, since every group of animals can be subjected to particular laws, and because the methodic choice of reproduction, the special education of the products, the breeding in and in, and the determined direction of the crossings which form the principal means of zootechnics, have evidently never been applied to humanity, where the union of the sexes is never directed by motives of this kind. The study of the conditions under which this union is effected thus acquires great interest. The degree of resemblance or dissemblance in the parents is, indeed, far from being without influence on the results of the generation, and the two extreme cases of consanguine union and the crossing of individuals belonging to different races deserve to be carefully studied.

Although to a great extent removed from the causes which, in domestic animals, give rise to the formation of new races, man is not less subject to influences of extremely different and powerful media. He is, or rather believes himself to be, a cosmopolite. He bids defiance to all climates where other men can live, and his distant colonies constitute real experiments of which science must study the results. The action of a new climate may affect the health of the individual, his fecundity, the health of his offspring, and obstruct the preservation of the race. But when the race resists this test without having recourse to crossing, does it preserve its primary characters, or does it experience more or less profound transformations?

The social influences are not less deserving attention. To cite only one: Who can deny the anthropological importance of the institution of marriage and of its various forms? The promiscuousness of the sexes, polygamy, polyandry, monogamy, have so different consequences as regards the reciprocal selection of the parents, and the physical, intellectual, and moral education of the children, that frequently little more is required to understand and explain the destiny of a race. In the normal condition of things, woman's mission is not merely to bring forth children and to suckle them, but to attend to their early

education, whilst the father must provide for the subsistence of the family. Everything that affects this normal order necessarily induces a perturbation in the evolution of races, and hence it follows that the condition of women in society must be most carefully studied by the anthropologist.

The influences of climatic and hygienic conditions, of sexual selections and the social state, are not the only ones which may exercise a more or less durable action on the organisation of man. Peculiar practices, at times very grotesque, much spread among a great number of peoples, subject certain parts of the body to more or less serious deformations and mutilations. Some, as tattooing, are quite superficial, forming, so to speak, the national costume. Others, as circumcision, piercing the ears, lips, or nose, the extraction or filing of the teeth, the amputation of a phalanx or of a whole finger, the constriction of the chest, the compression of the feet, the flattening of the nose, the ablation of a testicle, etc., alter the form and the functions of the respective organs and constitute real mutilations. Others, finally, the most serious and strangest of all, affect the conformation of the cranium and the development of the brain. These various manifestations of national fancies, more than once sanctioned by religious legislation, are not confined to the modification of accessory organs; they extend to the transformation of craniological characters, characters of the first order upon which the distinction of types is based. We may therefore say that to a certain extent they change the type of the individual; and if a whole people has for a series of generations been subjected to the same deformation, it may be difficult to detect beneath these artificial characters the natural characters of the race.

But here a more serious and more general question presents itself, that of hereditariness, climate, mode of life, the social state, mechanical mutilation and deformation, may, in unequal degrees, modify the individual without resulting in a modification of the race. Race is not merely an ensemble of individuals, but a series of generations. Even when all the individuals of a generation present a common character, is this character not that of the race, unless it is *naturally* transmitted to their progeny. Consequently a race can only be considered as modified when the new-born child, without having been subjected to the action of the various circumstances which have influenced the parents, already bears the stamp of the peculiarities which distinguish them, or at least ultimately shows these peculiarities as a consequence of natural development, *i. e.* without the concurrence of circumstances which have engendered them in previous generations. The study of the modifications produced in man by the action of media cannot

explain the question of the permanence or variation of type, unless it is followed up by the study of the laws and the phenomena of hereditariness. It is well known that most of accidental characters are not hereditary. The son of a peasant, tanned by the sun, is as white as the son of the most delicate citizen, and he would remain so were he not to follow up his father's profession. The son of a person who has lost a limb by amputation comes into the world with all his limbs; and if circumcision is still practised among the Jews, it is simply because the new-born children have not inherited the peculiarity from their fathers. But these are local modifications, lesions or alterations of organs, which only occupy a secondary rank in the functional hierarchy; and it may be asked if the changes of a more general nature affecting the constitution in its *ensemble*, or only an essential organ like the brain, may not in length of time, at the end of a number of generations, make part of the organism, become hereditary, and definitively alter the characters of the race. Thus the study of hereditariness, already so important in pathology, acquires a still greater importance in anthropology.

Individual spontaneous variations, which differ essentially from accidental or acquired variations just spoken of, may be transmitted for several generations, and by profiting of these spontaneous variations, by coupling animals possessing the same anomalies, breeders frequently succeed in producing new races. But the primitive type, although profoundly modified by these methodical perturbances, does not altogether lose its rights. It tends to re-establish itself despite the laws of direct hereditariness, and we see suddenly appear in the new race, in a certain number of individuals, one or several characters which do not exist in that race, and which altogether or partly reproduce the effaced type of the old generations. *Atavism*, that is, the resemblance to an ancestor more or less remote, is therefore engaged in a struggle with hereditariness, properly so called; and if the breeders did not take the greatest care to suppress or sterilise the individuals returning to the primitive type, the latter might finally absorb the whole race. It is a well known fact, that it is easier to make races than to preserve them. They all tend, as M. Flourens expresses it, "to unmake themselves" (*à se défaire*), that is to say, to return to their primitive type. This tendency not only exists in races obtained by selection, but in races obtained by crossing. In the latter case, the produced hybrids may, at the end of several generations, return all at once to the type of either of the mother races. But the phenomena of atavism may be observed in the human species quite as well as in domestic animals; so that the problem of the variability of type is not solved, if it were stated that an accidental charac-

ter is transmitted by hereditariness. It would still be requisite to investigate whether the laws of atavism do not reproduce at the end of several generations the ancient type which had momentarily been altered. This is sufficient to show all the interest which attaches to the study of atavism.

These are the chief questions which general anthropology comprises within its domain. We have preferentially cited such as, without distinction, interest all men of science, and such which possess a special interest for the physiologist and the physician; but we have been obliged to pass over a great number, in order not to lengthen this article. The reader will easily fill up the gap, if he attends to the definition we have given of general anthropology, or to that other less rigorous but, perhaps more striking, definition—*general anthropology is the biology of the human species.*

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#### DAVIS AND THURNAM'S CRANIA BRITANNICA.\*

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Of the various branches of the science of anthropology, none, except some of those which deal with prehistoric man, can be said to have been originated in our own time, but several have received a development altogether out of proportion to their previous condition. Among these is craniology, the students of which have within our own times found it necessary, in order to express their ideas with precision and brevity, to coin an altogether new system of nomenclature, an introduction to even a portion of which, as exhibited, say, in Professor Owen's note to Du Chaillu's *Journey to Ashango-land*, would have been enough, one would think, to make the hair of the venerable Blumenbach to stand on end. The heads of Blumenbach and Morton adorn the title-cover of each decade of the *Crania Britannia*, in token, we suppose, of the admiration entertained by the accomplished authors of the work for the father and grandfather of their science. They were great men, and their names will live long; but the present generation have the advantage of standing on their shoulders, and certainly see much further than they could. Must we add, that the prospect unfolded to them remains yet misty and obscure? We fear so. None of the great generalisations of craniologists appear to us so securely fixed

\* *Crania Britannica, Delineations and Descriptions of the Skulls of the Aboriginal and Early Inhabitants of the British Islands, etc., etc.* By Joseph Barnard Davis, M.D., F.S.A., etc., and John Thurnam, M.D., F.R.C.P.L., F.S.A., etc. London: 1856-65.

that men may safely and certainly build on them. Morton's views on the Egyptian and American skulls, for example, though ingenious and striking, are still as doubtful as when he put them forth; Retzius's classification has been shown to be erroneous in many particulars, for example, in the glaring instance of the brachycephaly of the Germans, whom he believed to be long-heads; and the value of his very basis of classification is impugned mildly by Barnard Davis, and more roundly by Professor Owen: and lastly, Dr. Thurnam's beautiful hypothesis of longbarrow-longheads has not convinced even his own colleague.

We may drag the ocean of phenomena long for valuable scientific generalisations; but if our net is of the right mesh, we shall surely in the end make captures worth striving for. The question is, whether the method employed by our authors is a good one, or is the best available? We think it is. Through years of patient labour Drs. Davis and Thurnam had been accumulating the stores of which samples are presented us in these volumes, copied with marvellous exactness by the unerring pencil of Ford. Never before, certainly, had representations of skulls been produced that could vie, in beauty and accuracy, with the sixty that form the texts on which the authors so lovingly and learnedly discourse. Nor do we think that any of the works on a similar plan with the *Crania Britannica*, which in several countries have followed and been as it were engendered by it, are comparable with it in this respect, nor indeed in the magnitude of the work or its general value; though such volumes as those of Nicolucci, and Ecker's *Crania Germaniæ Meridio-Occidentalis*, and those of some Swiss anthropologists, etc., are all of great value and interest, and too little known and studied in this country.

Certainly the interest felt among us in anthropological studies and pursuits increases year by year. Witness the long and ever-increasing list of fellows of our society, and the various stages of the warfare carried on at the meetings of the British Association for some years past, during which the progress of enlightenment and public interest in the subject has scarcely ever sustained even a momentary check. Who, two or three short years ago, would have dreamed of an Anthropological Congress in Dundee?

It is hard, however, and tells very unfavourably upon our progress, that considerations of expense hinder, in this country more than in most others that boast themselves civilised, the publication of works like the present. To bring out a costly volume by subscription requires an immense deal of trouble on the part of author or friends to secure the requisite number of supporters; and we doubt very much whether even the long array of subscribers, headed with the



names of imperial and royal highnesses, and the titles of metropolitan and university libraries, can have saved Dr. Davis harmless in the matter of expense merely; while of course all the labour of many years which is here concentrated and condensed, must be expected to go entirely unrewarded, save by the scientific reputation, not merely British but world-wide, that has accrued to the authors, and by the consciousness of having made a donation to anthropology the like of which she had not yet received.

The book furnishes a very favourable example of the results of the method of hunting science in couples, which is much more practised abroad than in England. No scientific man, or member of the medical profession, would have any difficulty in naming dozens of instances in which two savans have worked together amicably and with reciprocal benefit for the elucidation of some obscure department of their science, or for the publication of their separate investigations. So much has this been the custom in France, but still more in Germany, that there are numbers of names familiar to us as household words, every one of which cannot be pronounced without suggesting that of a collaborator, his twin in reputation now and for ever. Who can think of Bidder without Schmidt, or of Thenard without Gay-Lussac? To most of us Neubauer is inconceivable without Vogel, and Rilliet without Barthéz, or Bernutz without Goupil; and finally, it was but the other day that Fick and Wislicenus, like a double star rising over the Faulhorn, illuminated the field of food chemistry.

We suppose it is the bristly individualism of our countrymen which hinders them from entering into similar combinations, for nothing short of the constantly imminent peril involved in a scramble over the Rocky Mountains, or a sojourn among Ethiopian despots of the Theodorus and Kamrasi types, seems capable of welding together permanently a couple of English savans. Much honour, therefore, is surely due to our pair of authors, who, without sacrificing to each other their independence in matters of doubt and opinion, have been able, through the whole course of a joint labour, occupying several years, to work in perfect parallelism of purpose and execution, dovetailing, so to speak, the results of their separate studies and observations, so as round into one perfect and harmonious whole the greatest work of modern English, perhaps we should say European, anthropology.

The original idea, and the general plan and responsibility of the work, belong, we believe, to Dr. Davis, but Dr. Thurnam had formed a separate scheme before the union of the two. The descriptions of the skulls are due, some to the one, some to the other anthropologist. The remainder of the text consists of nine chapters, of which the fifth, which is by far the longest, and is entitled the "Historical Ethno-

graphy of Britain," is the contribution of Dr. Thurnam. It contains an elaborate, learned, and beautifully illustrated account of all that is known of the earlier inhabitants of Britain, down to and including the Roman period. The remaining chapters we owe to Dr. Davis. They include, besides some shorter and less important ones, a very interesting treatise on distortions of the skull, a subject well known to be eminently the author's own; an ethnographical sketch of the successive populations of Britain, and a somewhat compressed but valuable account of the distinctive physical and moral characteristics of its present inhabitants, embodying not only his own observations but those of numerous other anthropologists and naturalists in various parts of the country. We have already hinted at the existence of certain differences of opinion between the authors. These in no degree impair the coherence and consistency of their work, in which, however, may be found the greater part of the evidence which, variously interpreted, has served as the foundation of the theories alluded to. Dr. Thurnam's views as to the existence of successive races in the so-called Celtic period, of which the earliest was short in stature, short-faced, and long-headed; and the second tall, large-featured, and short-headed, have been made fully known to the Fellows of the Anthropological Society, and to the scientific world at large, by his elaborate papers on the subject in the Society's *Memoirs*. We believe he adheres to the theory there expressed, which has been strengthened to some extent by certain of the Rev. W. Greenwell's discoveries in Yorkshire. On the other hand, Dr. Davis seems to remain unconvinced of its truth, attaching much greater importance than his colleague does to the quasi-accidental variations of the form of the skull that occur in every race, as well as to the influence of certain causes of distortion, developmental, nutritive, or posthumous. And Dr. Hunt's discoveries in the barrows of Dorsetshire appear to strengthen Dr. Davis's defensive position. With respect to the interesting controversy as to the relative proportions of Saxon and British blood in the modern English nation, on which so much light has been recently thrown by Mr. Pike, these volumes supply a mine of information, to be found chiefly in the chapters which bear the mark of Dr. Davis. On the whole, we should say that he attributes more importance to the Teutonic blood-element in England than Mr. Pike would probably be willing to allow.

J. B.

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## THE EXTINCTION OF SLAVERY IN BRAZIL, FROM A PRACTICAL POINT OF VIEW.

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THIS important social question has for many years occupied the attention of all practical and non-sensational philanthropists in the growing empire of Brazil, and it is with great pleasure that we present, in a concise form, the results of the experience of Senhor A. M. Perdigao Malheiro, a gentleman well known in that country as an ardent and patriotic statist and philosopher. The following letter from Captain R. F. Burton characteristically and admirably introduces the subject, and renders any further remark unnecessary.

Writing from Rio de Janeiro, June 1st, 1867, Captain Burton says :

"The language of the writer is that of a man who has deeply studied the subject. His moderation and practical wisdom, qualities not often united in the Latin race, contrast strongly with the violence and the ignorance displayed by some Anglo-Saxons. The fact is, that the Brazilian, like the 'Southerner,' knows the negro, and justly esteems him as a slave. The Englishman, so wise within his own island, and so strangely unwise out of it, knows nothing of Africans except by traditions that deceive him; can know nothing, because he still listens with fond fraternal love to the false witness of missionary humbugs; and will know nothing, because his truly national complacency and self-esteem, not unoften degenerating into bull-headed arrogance, persuade him that he knows everything.

"M. Malheiro, curious to say, has not dwelt upon the most important point of his subject, namely, the natural extinction of slavery in Brazil. The negro death-rate greatly exceeds the birth-rate; the importation is definitively at an end, and the studies of the last two years enable me to assert that, taking for a basis the present ratio of decrease, the servile element will have completely disappeared from the southern and central provinces of the empire, whilst it will have been reduced to a minimum in the northern and most tropical before A.D. 1887. Upon one subject M. Malheiro and I join issue. The Brazilian citizen is, as a rule, humane to excess. The demoralising punishment of the lash and the gibbet shock the national sensibilities. The question is, 'Can society, in the present state of the empire, be adequately defended without flogging and putting to death?'

"I believe that it *can not*.

"Acknowledging no right in society to take the life of a fellow-creature except absolutely for self-defence, I find in Brazil that man's life and property are not safe without execution. The reformatories are not sufficiently numerous, the gaols are not to be trusted, and

the frightful murders here committed by the headstrong and half-reasoning negro are, I believe, on the increase, and the murderers should be placed beyond the power of repeating their enormities.

"At the same time I blush, as an Englishman, to see the backs of our free-born soldiers and sailors torn by the lash, and the hanging of women in Great Britain is one of those scandals with which she still edifies the world. I am, however, lapsing into an essay. *Ergo*, adieu. —Yours, etc., R. F. BURTON."

M. Malheiro addresses himself thus to the editor of the *Jornal do Commercio*, at Rio de Janeiro, the 13th April, 1867, and the communication is published in the number of the 17th April of the same year, and we are indebted to Mr. Richard Austin, of Rio, for both the foregoing letter and for the following translation, which we have, however, slightly compressed:—

"As a service to the public, and a special favour to me, I will request you to give publicity in your estimable paper to the following article, which is simply an abstract of a plan which I have elaborated and drawn up on the important question now occupying the attention of the country and its government, as officially declared in the reply of the 22nd of August of 1866, to the French Abolition Society, and in the *Diario Official*, No. 98, of the present month. I hope not to be accused either of trifling, exaggeration, or rashness.

"These ideas are the result of a conscientious study of the question, which I shall hereafter take an opportunity of enlarging upon in Part III of my *Essay on Slavery in Brazil*, now in hand.

"The question of slavery amongst us is one of the greatest importance and the most intense gravity, for it not only affects private interests deserving of every consideration, but also most directly the well-being of the public. Labour, above all field-labour, is almost exclusively confined to the slave from Pará and the Amazon up to Rio Grande do Sul, and from Cape St. Agostinho to Cuiaba; even in the provinces, where slaves are becoming scarce, as in the towns and villages, slave labour still exists.

"The slave population numbers at least one million four hundred thousand individuals, and according to others one million seven hundred thousand (*Padre Pompêos' Geography*, 1864), or even two million, or two million five hundred thousand in advance. The chief source of the public wealth, the most important element of support to our commerce, the culture of the earth, is in most cases effected by the slave. Without agricultural productions our commerce cannot even be maintained. Manufacturing industry, the mainstay of other countries, in ours is as yet in its infancy.

"So that to attack slavery, to transform slave labour into free, is not only completely to change the aspect of our society in its populous centres, but also, and principally in the country, it is to touch our chief source of production, and consequently of public and private wealth. On the other hand, it is to sever relations between master and slave, between obedience and command; it is to destroy the existing organ-

isation of those social circles, the basis of our great social status, however imperfect that organisation may be ; while it is to be feared that its transformation cannot take place without a shock to the social status which will recoil upon the state. Precipitate measures may produce not only incalculable disorganisation, but also dislocation of public order, and such a reform involves a crisis which we ought to have the power to encounter ; it is a peaceful revolution in favour of the real, moral, and material well-being of our land. As emancipation must and will take place (morally, and in idea the public mind has already accomplished it), it is only a question of method and opportunity, which, though apparently easy, really offers many difficulties.

"I. OPPORTUNITY.—Were it not for the extremely critical circumstances in which the war with Paraguay has placed Brazil, continuing as it does to drain her lives and finances, the matter might at once be brought before the Legislative Chambers, and the Government ought to undertake the passing of necessary measures, in the same manner as was done in 1850 in reference to the African slave trade. As long as the war lasts, however, the matter should not be taken in hand by the Legislature, from a consideration of the consequences which might arise to the prejudice of peace and public order.

"Besides, the Government should have at its disposal an armed force capable of maintaining peace and order, and of protecting the inhabitants under certain eventualities, which, for the present, is out of the question. To attempt half measures would be worse still, inasmuch as experience has taught us that in matters of this nature it is better either to let them alone or boldly and promptly to attack them with proper remedies.

"In the meantime measures might be taken to facilitate immigration,\* also in matters relating to mixed and Catholic marriages, the concession of lands, extension of intercommunication, and other correlative questions.

"I do not mean, however, that the solution of the problem should be indefinitely postponed. This is no longer possible. Indeed we should be forced into granting it on the one hand by the opinion of civilised nations and the ideas of the age, and on the other by the country itself ; in fact, it may be forced upon us without liberty of action and choice. The Legislature and the Government ought to address themselves to it as soon as the war is over ; peace will restore the country to its normal condition ; and although the financial condition will be unfavourable and the public debt enormously increased, a smiling future is to be hoped for. The productive powers of a rich, young, and vigorous country such as ours should not be despaired of.

"II. METHOD.—This very delicate and complex question has been long in agitation. In the Legislative Assembly various projects were offered as long ago as 1831, and again in 1866, regarding the national slaves, and those being private property.

"Immediate emancipation is absolutely impossible at the present

\* This is now being done—skilled labourers and small capitalists receiving aid in various ways from the Brazilian Government in the purchase of lands, etc.—Ed. A. R.

juncture, nor is it even proximate, because the great number of slaves existing among us prohibits it. It would involve a hasty transition of the million, or nearly two millions, of slaves, from slavery into freedom, to the obvious injury of all parties of the State, as well as the slaves themselves; public safety would be in very great peril, as recent events have shown in European colonies; while the occurrences which have taken place in the American Union should be a lesson to us to guard against similar errors. Moreover, the public exchequer could not defray such a sum; the total, estimating the slaves at one million five hundred thousand only, and at 800 mil reis (on an average) each, would amount to 1,200,000,000 mil reis, or £12,000,000 sterling. Leaving it to time and natural causes, as some advise, the slave having a tendency to disappear by death, enfranchisement, and disproportion of births, would be equivalent to inaction or the retention of the evil without providing any remedy.

"These extremes have a pernicious tendency. A combination of direct and indirect means, therefore, is what should be attempted to bring about the utter extinction of slavery in Brazil. To do this, in the first place it is necessary to ascertain from history and the present law the causes of slavery, so as to assail it from its origin. From the slave trade there is no longer anything to fear. It is extinct. (*Report of Ministry of Justice for 1866.*)

"Birth still remains a legitimate title, since it is so constituted by law, and in my opinion is the only legal title in existence. But according to statute 4, cap. 63, by many held to be still in force, and as it has been decided in the courts of the empire, the revocation of freedom for ingratitude on the part of the freed man is likewise a legal title; yet many, and I among these, regard the statute as abrogated, although not actually revoked.

"The cardinal principle, the corner-stone of reform, would be a proclamation of liberty from birth—in other words, emancipation from the womb, as maintained by me in a discourse, since printed, pronounced at the grand Session of the Institute of Brazilian Advocates, September 7, 1863.

"And there should be an implicit declaration also to the effect that statute 4, cap. 63, is abrogated; requisite, in order to avoid a continuance of the divergencies of opinion, the main cause of the uncertainty of the law, and very prejudicial to reformation. Nor is this all. What guarantee is there for the thus free-born offspring of slave mothers? What guarantee regarding existing slaves? What complementary measures ought to be adopted?

"In so far the children are concerned the rule should be, I am disposed to urge, that which guides the legislature of several other states, and especially the American Union, viz. that they be allowed to remain with their mothers, to be reared and educated under the protection of the owners of the latter; the owners, by way of compensation, having a right to their services gratuitously until, say, they become of age, when, according to our laws, they become eligible for all the duties of civil life and minors for emancipation.

"Thus all things would be conciliated; the humanity and charity,

so characteristic of the Brazilian, would be vindicated ; order would not be disturbed, nor social customs ; the freeing of the slave-woman's offspring, to be reared and educated by the former, being of frequent occurrence, even without reservation as to their services ; the minors would thus gradually be fitting themselves, particularly in country districts, for free labour, thereby warranting the expectation that slave labour would, by this method, be gradually transformed into free, with great private and public advantage.

"There is a complicated preliminary question to be solved as regards the slaves at present existing as such, in spite of its seeming simplicity. Is it desirable that a definite period be forthwith fixed for their ceasing to be slaves ? or should the question be reserved for ulterior deliberation ? When shall that period commence ? whether with indemnity or without ?

"Since the end to be attained is the complete extinction of slavery, it would seem more desirable to appoint a final period, similar to the determination of other nations, and with a view, moreover, to the prevention of abuses, which might reasonably be apprehended, that some individuals would be retained in a state of slavery who were legally free ; and because, if the evil of slavery ought still to be endured for a season, upon well-weighed grounds of public and economic order, as well as out of regard for private property, this same public good (the first always to be thought of, even to the prejudice of private interests), would advocate that this toleration should not be of indefinite duration ; slavery and freedom are matters repugnant and contradictory to one another.

"But, under such circumstances, when should this event or period commence ? Consistency would be maintained by making it correspond with that fixed upon for the gratuitous services of the offspring of slaves born free according to law. This period, however, should be a solemn one, memorable for some religious event of great importance, the better to awaken consciences, and in a marked manner to signalise emancipation. Thus Christmas-day, the anniversary of all that is peculiarly solemn to the Christian mind, a day of rejoicing and festivity, would seem a suitable one ; just as Christ introduced religious and moral reform, liberty, civilisation, and advancement, so also the anniversary of his birth should bring liberty to those who may be born on such a day ; and upon that same day, when they shall have completed their twenty-first year, those might be freed who existed as slaves.

"The Jews had their Sabbatic year, and the Jubilee, in which slaves became free. For the Christian it should be the Christian year. The Benedictine Order selected the 3rd of March, 1866 (the Invention of the Holy Cross) to proclaim free the offspring of the slave-woman of the order who might happen to be born from that day forward.

"It is my opinion, however, and one which I formally declared in the discourse of 1863, to which I have had occasion to refer, that it is more desirable to reserve this question ; the present condition of the empire makes this advisable, more particularly for the sake of order and the well-being of society. The postponement of this decision does



not present the same drawbacks that a premature measure would, save where it was purely illusory.

"But, in the event of a definite period being fixed upon, ought owners to be compensated for the value of slaves which they may legally hold at the time? This difficulty has already been suggested to us by his Excellency the Viscount de Jequetinhonha, in the *Jornal de Commercio*, July 3, and August 14, 1865. A negative, which otherwise is compatible with the absolute right entirely ignoring this property—the slave—would have the great advantage of not burdening the public exchequer with an outlay which cannot be readily estimated, and consequently of not taxing the finances of the State by the augmentation of this item, when its debt to-day, owing chiefly to the war, is much greater. But inasmuch as the slave is by law real property, it should be respected as such; it is so ordained by positive right itself, human law, the only power by virtue of which slavery exists. Compensation is therefore an act of justice not only to the owner, but as affecting third parties, particularly where slaves may be hypothecated or given in pledge; or at least it is beyond doubt a matter of equity, since it is a property held and subject to negotiation under the protection of the law.

"Having disposed of these capital questions, further measures should be taken to facilitate emancipation by indirect means as well as to better the condition of the slaves, and in like manner to regulate the new relations naturally emanating from those new arrangements. Thus:

"The object being to facilitate manumission, it were desirable—1st. To secure to the slave his profits—that is, what he gains legitimately for himself by his industry for the benefit of his owner or a third party, or fortuitously, and being allowed to ransom himself by this means. 2nd. By allowing the slave, when he has to be separated or sold through force of circumstances, to ransom himself or be ransomed by another by valuation. 3rd. By proclaiming free all slaves left by issue, the effects of defuncts and absentees, and unclaimed slaves, wherever there is not a purchaser, which happens, as a rule, from their being, in such cases, old, infirm, unable to work (as facts prove), and therefore worthy objects of such a boon, the owners or heirs not having any right to make claims for compensation. 4th. Such as are abandoned by their masters as infirm and unable to work should also be proclaimed free; the owners, however, when known, being obliged to support them, or pay for their support, provided they can afford it. 5th. Freedom to be granted gratuitously to the slave who renders valuable services to his owner, or any member of his family, such as saving life, rearing his offspring, and the like. 6th. Freedom to be granted by means of compensation to the owner for meritorious services rendered to third parties, and, above all, to the State and to religion. 7th. Freedom to be secured to the slave who, with the direct consent, or even tacit acquiescence of his owner, contracts marriage with a free person, or who establishes and conducts himself as free in any branch of industry, profession, or even public service. 8th. In like manner to the slave who may be seriously injured by his master, or his wife or children, including the offence defined in

Article 219 of the Criminal Code. 9th. That a married freedman, or any one in his behalf, may ransom a married slave and her offspring; it is the protection of the family status.

"These measures would combine to improve the condition of the slave, while they indirectly promoted emancipation. But it would be desirable to adopt further steps for the same object, such as—1st. To prohibit the separation of husband and wife and offspring under age, thereby recognising family rights, enabling them to transfer their families when they become free into the society of the free. 2nd. To prohibit the sale of slaves by private or public auction, it being a degrading custom, and offensive to public morality. 3rd. To prevent slaves being ill-treated by their owners, whether morally or physically, and to endeavour to promote humanity towards them. 4th. To reform the penal law and criminal process, abolishing flogging, irons, and capital punishment. 5th. To grant them access to preparatory schools; it is desirable they should receive a certain amount of education, religious and secular. 6th. To permit slaves to hold property, with a view to their not only being able to emancipate themselves, but to create a taste for labour. 7th. To do away with mortgages and embargoes upon slave property, excepting in agricultural establishments. 8th. To encourage marriage, the origin and basis of the social state.

"As to slaves belonging to the nation, and to convents and fraternities, they ought to be emancipated forthwith, but disposed of suitably, measures being taken to guard against injurious consequences. It is unbecoming the national dignity to own slaves. Every inhabitant of a free country ought himself to be free.

"It is yet more unbecoming and unchristian that religious orders should hold human beings in slavery, and even live by the sweat and labour of the slave! It is contrary to every precept of the Divine Redeemer, and contrary also to the solemn protestations of the profession. This emancipation ought to be effected without compensation. The State has an absolute control over the whole property of the fraternities. These might be settled on the lands to which they pertain, or on others to be assigned them, thus forming colonies, or else distributed among the already existing colonies, especially the military; they might be also adapted to other modes of employment in conformity with their capabilities and taste.

"Further precautionary measures would be necessary, such as—1st. A summary process in the civil courts for questions respecting slaves and freed. 2nd. Exemption from costs as regards themselves, as they already are from stamp duty, '*dezima*,' and other similar taxes. 3rd. The protection and co-operation of the public authorities in securing their rights to them, and in watching zealously over those rights. 4th. In all such matters to dispense to slaves and free the utmost amount of equity and justice. 5th. Reformation of the laws relating to location of service, adjusting these to their new wants. 6th. Police measures—above all, correctional police—to take summary notice of matters not strictly pertaining to criminal law. 7th. Amplification of the 179th Article of the Criminal Code, and special

judgment for the case, with a view to avoiding the evil and punishing it effectively. 8th. To declare the free eligible for public service, the usual and ordinary conditions being fulfilled, with the sole exception of the restrictions laid down according to the constitution of the empire.

"To these might be added the apportionment forthwith for purposes of redemption by the State, all taxes originating from slavery itself, such as the annual tax of the '*matricula*,' the '*mica-siza*,' the '*dezima*,' those derived from heritage and legacy, and from the process of qualifying heirs when treating of slaves, the tax on registration of dowries in slaves and others, by that means organising an emancipation fund, to be applied according to the judicious decision of Government.

"Such are, in my opinion, the principal precautionary steps. These measures of legislation would be suitably developed in the regulations and instructions, which would render the whole scheme of emancipation complete, and would establish the best practical method of attaining these great objects.

"Recapitulated, this plan would comprise the following recommendations:—1st. The immediate abolition of the propagation of slavery; the increase of the class of freedmen, even though they emerge from the servile class. 2nd. Organising the family status in that class, wherein slavery had entirely destroyed it. 3rd. Creating in them a fondness for labour for themselves, and restoring to them the right of property and other rights. 4th. The moral and religious education of these beings. 5th. Protecting the slave and the freed, the owners and society. 6th. The averting of a sudden and unexpected scheme of emancipation. 7th. The reclaiming of the slaves themselves and the freed, for their own good and that of society, and the gradual transformation of slave labour into free. 8th. No disorganisation of the existing system of labour, especially agricultural labour, and thus the averting of an economic catastrophe, which otherwise might happen. 9th. The not burdening the exchequer with compensation for a forced and sudden emancipation, yet without impeding emancipation, but only rendering it more gradual. 10th. Thus ensuring for the country a future full of promise and worthy of the age, exalting it in its own estimation in the opinion of the world at large, and in that of posterity."

At a time when the whole question is forcing itself upon the attention of statesmen in all parts of the world where the institution has existed, this scheme of gradual emancipation merits the utmost consideration of all who desire the well-being of man.

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## PHYSIO-ANTHROPOLOGY AT EDINBURGH.

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THE paper read last Session by Dr. Hunt on Physio-Anthropology, before the Anthropological Society of London, has created considerable excitement among the phrenologists in various parts of the country, and among the various associations for that branch of inquiry. The Edinburgh Phrenological Association has chosen to make some further demonstration of opinion on the paper, as will be seen by the following discussion which took place at the annual social meeting of the 21st October, 1867. After the ordinary business of the meeting had been disposed of, the President (Mr. A. Reid) stated that Dr. Hunt's paper was being carefully considered and discussed at the ordinary meetings of the Association, and remarked that it would have been gratifying to the members of the Association if they could have had Dr. Hunt present at these discussions, as they then could have asked him to define himself more satisfactorily than he had done in his paper, and to cause him to hold by blowing hot or cold, but not both, on the "bastard science of phrenology," as Dr. Hunt has styled it in his address at Dundee.

Mr. J. W. Jackson, F.A.S.L., then said that he had more than ordinary pleasure in addressing the meeting on that occasion, inasmuch as he had noticed that a general misconception seemed to prevail upon the tendency of Dr. Hunt's paper. It was one of the most important events in the history of phrenology that it had thus been introduced to the notice of the Anthropological Society of London. The speaker trusted to remove the adverse impression which appeared to exist on this subject. He would, however, not derange the order of the remarks he intended to make on the history and prospects of phrenology. He would proceed to make a few observations on the errors of their predecessors, and on the manner in which their deficiencies may be supplemented, and add to the list of their discoveries by an employment of clearer views and renewed energy. First, it was to be admitted that from the absolutely inductive method in which the several organs now constituting the phrenological chart were discovered, by a most careful comparison of character with cranial contour, extending over many hundred individual instances, it was almost unavoidable that Gall and his immediate followers should be organologists, thus exaggerating the importance of particular organs, regarded

separately, and proportionately undervaluing the grander outlines of cranial contour. In accordance with the materialistic spirit of the age in which they lived, they assigned too much importance to quantity while disregarding quality. They continually rang changes on size of organs and volume of brain, while temperament was spoken of rather incidentally, till at length it came to pass that large heads were regarded practically as the test of superior endowment. Cerebral development was also regarded as almost the sole index of character, and consequently they underestimated the significance of the remaining portions of the organism. They were but imperfectly aware of the importance of respiration, alimentation, and locomotion to effective cerebration, and hence were not sufficiently careful in their observation of the chest, the abdomen, the limbs, and the extremities. They did not sufficiently understand that the organism is a structure integer, and not a mere congeries of isolated organs and independent functions. These errors marked the progress from ignorance to knowledge. After a pause of nearly a quarter of a century, phrenology has entered upon its second phase of development, and the original founders of the science have lost much of their hold upon the reverence of the men of the present age. The speaker then urged on the meeting the necessity of looking to the future rather than to the past, so as to prepare for the demands modern science is likely to make upon professors of phrenology. It was necessary to cease being only cerebral physiologists. Physiognomy must be studied, a bipolar relation between head and face being admitted, the functional activity of the former being often predicable from the predominant expression of the latter. Temperament should be studied in connection with anatomy and physiology, to learn their reaction on cerebration. The brain must also be studied pathologically, as to quantity, quality, and contour. This would supply a new chapter to medical science, supply the physician with data hitherto unknown for estimating constitutional tendencies. It was desirable to advance from human to comparative phrenology by a careful comparison of the brains of brutes with their known habits and instincts. This should extend from the simplest radiate, through the mollusca, articulata, and vertebrata, up to man. The vertebrata would probably be found the most interesting, and among these the mammalia, as nearest to man; but the lower divisions should not be neglected; as in the articulata, for instance, we find the ant and the bee, with whom blind instinct assumes the form of high intelligence. In such an inquiry it is most important to take into consideration the racial diversities of man, and by a careful comparison of these different types to endeavour to ascertain the conditions which determine their respective places in the scale of rational being. In this

phrenologists would be aided by a study of those grander divisions of the nearly allied Mammalia, termed by Professor Owen *Lyncephala* (small-brained), such as kangaroo; *Lisencephala* (smooth-brained), such as sloth; *Gyrencephala* (convoluted brain), such as ape, lion, dog, elephant—approaching so nearly, yet differing so widely, from the *Archencephala* (governing brain), whereof the only existing examples are the various races of man. Without insisting on the truth of a suggestion already familiar to some present, that man, as the aerial type of these quadrupedal mammalia, must ultimately produce profoundly correlative orders, species, and genera, whereof existing races and varieties are the germinal beginning, and contemplating the mammal brutes as simply the type of sentient being most nearly allied to man, we may be sure that a carefully-conducted study of their habits and instincts, as compared with the simplicity or complexity of their cerebral structures, cannot fail to throw considerable light on the capabilities of the various races of man. The speaker specially commended for study those animals susceptible of domestication. Their anatomical and physiological specialities should be compared with those of the wild and irreclaimable varieties and species; and do these specialities throw any light on corresponding aptitudes and inaptitudes in their human correlates?

From this it would at once be seen what vast provinces of inquiry await investigation beyond that narrow round of recognised organology and temperament which phrenologists have been so contentedly treading for the last quarter of a century; that is, since he, whose labours we have now met to commemorate, had passed the meridian of his powers. And here (said the speaker), were George Combe once more among us—clear-headed, vigorous, expansive, and receptive, as he was at five-and-thirty, he would be more dissatisfied than any man in this assembly with the fossilised condition of existing phrenology, and would apply himself with all the victorious force and unwearied assiduity of the olden time, to enlarge the boundary of its investigations, and to place it abreast with the wide aims and profound views of contemporary science. And this brings me to our present position and the duties arising from it, more immediately in relation to the recent discussion on physio-anthropology during the last Session of the Anthropological Society of London. This discussion, as already remarked, inaugurates a new era in the history of phrenology. It places it once more in the list of living sciences, and as a necessary accompaniment of this new position, our time-honoured conclusions are questioned and our traditional ideas are disturbed. Some here are very indignant at the intimation that phrenology is based on unfounded assumptions, derived from the older systems of mental

philosophy, which preceded it. But, contemplated from the standpoint of positivism, such a conclusion is unavoidable. So viewed, phrenology is still very largely in its metaphysical stage, and would be defined by a rigid follower of Comte as a philosophy rather than a science. Now, it is not necessary to be angry at this. Positivism, which may be defined as induction in its ultimates, was unknown in the earlier days of Mr. Combe, and was, of course, never dreamed of by Gall and Spurzheim. Its severity would have astonished Newton, and probably appalled Bacon himself. It inaugurates the reign of facts as opposed to that of ideas; and, left to itself, would probably enthrone the concrete on the ruins of the abstract. In the logic of events, its advent was unavoidable. Its apostles are worthy of all honour, for it is their vocation to work at the foundations of knowledge; to see that these are trustworthy and secure. Their business is to look to the stability of the edifice of science, by the exclusion of all unsound blocks from its structure, and by insisting on the most rigid adherence to the plan of induction in the process of its edification. Phrenology, subjected to their ordeal, will emerge with its facts confirmed and its hypotheses destroyed.

Again, some seem astonished that our anthropological friends should speak of reinvestigating the entire subject of cerebral structure and functions, *de novo*, as if nothing certain had yet been ascertained as to the relation of the latter to the former. But why should we be offended at a proposal which, if honestly carried out, can only eventuate in the establishment, on a yet firmer basis, of those great truths whereof we have been for so many years the despised witnesses? Would any astronomer object to a society of distinguished men determining to repeat the observations and verify the calculations on which his science professes to be based? It is the same with the chemist and electrician. These gentlemen know that a reinvestigation of their accepted facts can only eventuate in their confirmation. And is there any reason why we should be animated by less confidence, or more alarmed by such iconoclastic zeal on the part of our new converts? If I have interpreted our attitude aright, during the many long years of patient expectancy in which we have waited for such an event as the present, we have desired and courted rather than feared a thorough and searching investigation of the facts and principles of phrenology, feeling assured that in all its main facts and grander conclusions, it would emerge unscathed from the process.

And, lastly, some of you seem offended at the contemplated change of terminology, more especially the disuse of the term phrenology. But on this subject I think we may remain comparatively easy, as, unless our friends the anthropologists succeed in founding an entirely



new scheme of cerebral physiology, it is not likely they will prevail in imposing a new nomenclature on a province of inquiry, where they are as yet utter strangers, and wherein their labours will, as we apprehend, eventuate not in the discovery of fundamental laws, but at most in the addition of corroborative and supplementary facts. This, however, is a question, the consideration of which may well be postponed to a future occasion, when we as phrenologists shall doubtless be parties to the settlement.

This brings me to the conclusion of my remarks, and to the object which I consider of more importance than anything yet touched upon. I allude to the possible union of phrenologists and anthropologists, if not in one society, then at least as closely allied and intimately associated bodies, avowedly devoted to the same grand object, namely, the science of man, pursued, not in subjection to traditional ideas, but in strict obedience to the teachings of nature.

Of this science, phrenology, or cerebral physiology, or physio-anthropology, constitutes a most important province, and I trust, therefore, that the day is not far distant when every anthropologist will also be a student of phrenology, and when, conversely, every phrenologist will feel an enlightened interest in the progress of that yet larger and more comprehensive branch of knowledge which we term anthropology. And it is as a step in this direction that we should rejoice at the recent discussion in London, inaugurated by the manly and fearless address of Dr. Hunt, who has thus doubtless initiated a movement which cannot fail to be productive of the most important results to the science of man.

After some further discussion, the meeting then adjourned.

At a subsequent ordinary meeting of the Association, held on the 30th October, 1867, the President, Mr. A. Reid, made the following observations :—

It is stated by some authorities that human society passes through three phases—the theological, the moral, and the intellectual. Without holding myself responsible for the order of sequence, I think I am quite right in believing that the present age is passing through the intellectual phase. Machinery has been improved by intellect, and we can by steam go as far in an hour now as formerly we could go in a day, both by land and sea. In the same manner we may contrast the kite of Benjamin Franklin with the modern electric telegraph. Without carrying our observations into all the channels of the intellectual activities of the age, it may suffice to observe, that when we are satisfied that the achievements of man's intellectual nature are

so great, it is surely a becoming study for us to understand what we can regarding the source of this power.

In very many of the operations of his nature, man is not greatly distinguished from a great number of the animals below him; in some, indeed, he is their inferior; it is our duty, therefore, to endeavour to understand wherein he differs from even the highest of the lower animals.

Phrenologists claim for him, as the cause of his difference, the superior development of the frontal region of his brain, in which they state his intellectual character is located, and his additional development of a moral or coronal region, which the lower animals have not. In these regions, in addition to the aggressive and domestic regions of his brain, phrenologists believe they have produced sufficient evidence to warrant them in holding that each region contains a certain number of faculties or functions, each of which is performed by its distinct organ. This claim has been lately called into question by Dr. James Hunt in a paper he read before the Anthropological Society, and, so far as the chief point of his attack is concerned, he is justified in so doing; but it is a fact worthy of being remembered, even by Dr. Hunt, that "those who live in glass houses should not throw stones"; this, I think, has not been remembered by him whilst descanting upon the causes of failure in the science of phrenology. It is right to demand of any science that no terms should be used which contradict the facts it declares to have proved. Dr. Hunt makes his chief attack upon the phrenological axiom, "that the brain is the organ of the mind," which he designates "a gigantic assumption," because "we know nothing of the mind." "We only know of mental phenomena in connection with a nervous system." Does Dr. Hunt name any phrenologist who asserts the contrary? The brain is asserted by phrenologists to be the "organ" (in a collective sense) by which, or through which, mental phenomena are evolved. I am not aware whether the founders of phrenological science (I beg Dr. Hunt's pardon for using the term science) held the belief of mind being an entity separate, and independent in existence, from brain; if they did, I, as a "modern" phrenologist, disclaim connection with such, and demur to being designated "unscientific" in what I hold, and am prepared to teach, upon phrenology. Dr. Hunt must surely know that it is taught in the best works of phrenologists that "the brain is not a single organ, but a congeries of organs," endowed with separate and distinct functions, and that the philosophical idea of entity of mind is not the belief of the best authorities in phrenological literature. It is not to be wondered at, however, if some authorities in the science are found to entertain such belief, when we consider the speculative

condition of mental science at the time when Gall came before the world with his discoveries. The theological, and not the scientific, mind was the source of such speculations.

It not being my object, in noticing what Dr. Hunt has said about phrenology, to defend any position held by phrenologists that is inconsistent with the known facts of mental science, I wish only to point out where I think Dr. Hunt has shown that want of scientific exactness that he attributes to phrenologists as the cause of their having failed to exalt phrenology into the rank of a science; and it would have tended much to support his claims to scientific exactness if he had given some physiological proof when he made the statement that "all intellectual phenomena are functions of the nervous system or of the entire body." Let us keep the doctrines of phrenology out of view for the present, and ask who are the authorities in mental science that teach, or who would endorse what Dr. Hunt here states? We have heard, and still may hear, people speaking as if the heart and chest were the seat of the mental emotions; but surely we must expect some better acquaintance with the laws of physiology by men professing to speak and investigate with scientific exactness. It would be about as exact to assert that the whole muscular system was engaged in the act of respiration, because they are muscles specially employed in this function, as to believe that the whole of the nervous system is employed in evolving "intellectual phenomena," because this evolution is the result of nervous function. The merest tyro in physiological knowledge is aware of the influence of sympathetic action in muscular and nervous function, but to believe that this has anything to do with special function, which every nerve and muscle in the body possesses, is an induction I refuse to follow.

Now, how does the case stand with phrenologists as regards scientific exactness in their inductions? They believe the brain to have the following regional divisions, viz., the intellectual, moral, aggressive, and domestic, to each of which there belongs a series of sub-divisions into what they term organs, which perform functions distinct from each other. A few of these, they acknowledge, have not the same amount of evidence in their favour which the rest have. And what does this acknowledgment amount to? To no more than has been the case with other sciences—that all science is progressive—that no science becomes perfect at once—much has yet to be discovered in physiological, pathological, and kindred sciences, although this by no means detracts from what has been discovered.

If, then, phrenologists are unscientific in what they allege they have discovered as functions of the brain, and that their system is not a convertible term with "cerebral physiology," it might be wise to stop

here, and ask Dr. Hunt to inform us what he considers to be the proper functions of the brain; because I consider the burden of proof lies with him, as he has attacked no tenet of phrenology except the one I have acknowledged him to be justified in exposing, but which, according to what phrenologists otherwise state that "the brain is not a single organ, but a congeries of organs," may be treated more as a grammatical than a scientific error.

It would have served Dr. Hunt's purpose better, and would have done greater justice to phrenology, if he had stated his objections in a more tangible form, as, with the exception I have noticed, he has attacked none of the doctrines of phrenology, and, until he has done this, phrenologists can offer no defence.

Let me, however, assure Dr. Hunt that the "modern phrenologists" who are known to me have as sincere a desire to investigate into all the laws of the nature of man as any anthropologist can have; but I do not consider it an unwise course to pursue the study of one department of his complex nature, in preference to spreading that study over so vast a field as the whole of it embraces.

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#### THE DUNDEE ANTHROPOLOGICAL CONFERENCE.

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We have to record an event, which, it is more than probable, will have an important bearing on the progress of the science of man.

Our readers will have been informed in previous numbers that some difficulties were anticipated by the anthropologists who were going to Scotland. Some residents at Dundee shared this opinion, and formed themselves into a committee for the reception of anthropologists. The official report of the proceedings of this committee having been given to the public in the report of Mr. C. W. Devis to the Anthropological Society, it is not necessary for us to dwell on these particulars. Suffice it to say, that all arrangements were made for the Association, but the programme came out, and there was no department for anthropology.

Under these circumstances a meeting of the Anthropologists and their friends in Dundee was held, and it was decided to hold a Conference forty-eight hours later.

It is not our object or duty to dilate on what was then done. We have only to record what took place at the Conference, and the result

of the same on the future prospects of Anthropologists in the British Association for the advantage of science. The following account of the speeches at the Conference is taken from the *Dundee Advertiser*, a newspaper which gave better reports of the meetings of the Association than any other paper has ever been known to do. By printing this from the public papers of the time, we shall be giving this address an historical nature. We may also add that this address was reprinted in the London *Daily News*, and also in most of the Scotch newspapers.

Between four and five hundred of members or associates of the British Association or members of the Conference attended the meeting, which was of the most enthusiastic character throughout.

#### THE PRESIDENT'S ADDRESS.

Dr. JAMES HUNT, on taking the chair, said—A few days ago I left the south of England, on a journey, and with a duty which caused me no little anxiety and a slight feeling of dread. For the last twelve-months I have been receiving letters from north of the Tweed telling me that the people of Scotland had made up their minds to declare war against the students of a branch of science in which I have long taken a deep interest. But not only have I received letters, but my attention has been directed to published articles, letters, and pamphlets, the perusal of which productions have produced mingled feelings of amazement and indignation. There may be other members of the British Association for the Advancement of Science who have also seen the publications to which I have alluded. By one person I was told that it was no use for Anthropologists to go to Dundee, for the people would not hear them. Another hinted that there were means to be employed which would remove any fears existing in Scotland against us. Of the amount of truth in this charge I know not, nor do I think it worth while to waste time in dwelling on this point. I think I shall be expressing a general feeling amongst the Anthropologists when I say that, however deeply and sincerely we regret the present position of our science in the Scientific Congress of Great Britain, we, at the same time, feel most sincerely that the non-formation of the Anthropological Department in the British Association was purely and solely based on an honest conviction of what they thought would most tend to the real advancement of science. I feel it my duty to make this statement at the outset, because I know that with many persons there exists a very strong feeling that we have been badly and unfairly treated. I know also that some have felt great regret, if not annoyance, by the exclusion of the Anthropological Department in the Association. Many declared to me that they would never have come to Dundee had they known what was to happen, while some of the local Association have also intimated similar opinions. I am sorry to perceive that there prevails a very general misconception respecting our exact relations with the British Association. To those persons who feel any annoyance with the Association, let me

entreat of them at once to relinquish such feelings. What has been decided on this occasion has been done with my own most entire sanction. I am both willing and anxious to have the entire responsibility of what has been decided. On Wednesday last it was in my power to have proposed a department for Anthropology in connection with the Biological Section. I fully and most carefully considered the matter, and did not feel it my duty under the circumstances to do so. At that time I felt that the papers I had brought up, and which I thought would have been passed by the Biological Committee, would not be sufficient to have supplied a department with sufficient papers. I felt, too, most strongly the real absurdity of having Ethnology in one place and Anthropology in another. I felt, too, a desire to go and hear my old friends and colleagues read their papers, and still more disinclined to do anything which could offend any members or associates of the Association. I felt justified in the course I then adopted, and deeply regret that some of my local friends, in their zeal for our cause, should have expressed themselves in language likely to give offence to the authorities of the Association. On the part of those gentlemen, I beg to say that the first feeling of annoyance and indignation has passed entirely away on the real facts being explained. By our present arrangements, we hope to be able to hear our friends and colleagues, the Ethnologists. I have only to regret that two of the papers read to Section E yesterday, by Mrs. Linton and Mr. John Crawford, I had the pleasure and satisfaction of hearing read at the Ethnological Society of London during its past session. Had the Biological Section allowed us thus to proceed, we could have kept up a department until the next meeting of the Association. Yesterday morning a meeting of strangers and residents in this town was held to consider what was best to be done for our science under the circumstances to which I have alluded. The situation was one of no small difficulty and delicacy. On the one hand, we had apparently—but only apparently—against us the most eminent scientific men of the age, to offend whom would be an act of both madness and ingratitude. On the other, we were told that the hostility of the people of Dundee against Anthropology was too great to allow students to speak out what they believe to be true. But great as we saw our difficulties and dangers, only one thing was wanted to bring us thus together. No sooner was it faintly hinted that we should desert our sinking ship than with one accord we felt the utter impossibility of such a step. Whatever offence we may have the misfortune to give either to the authorities of the Association or the people of Dundee, yet we all feel it better to receive the most virulent abuse rather than incur the contempt the desertion of our post would entail on us. Our first difficulty was to find one whom we could ask to take command of our apparently sinking cause. I suggested an appeal to some of the eminent men of science at present in Dundee, or to one of the distinguished and well-known residents of this town; but my friends all declared that it was my duty to them and to the cause of Anthropological Science generally, to rescue them from their embarrassing if not perilous position. I crave, therefore, the sympathy of the people of Scotland when I tell them that I now

occupy the position of President of the meeting merely to avert the contempt I should have received had I declined to obey the wishes of my colleagues and friends. To very many our cause appears, I believe, utterly hopeless, and they think that we should have shown more wisdom and more discretion had we gone back to our homes, and had we allowed the present opinions respecting the aim and method of Anthropological Science to be left to time to be corrected. If we had consulted our own ease and comfort, I have no doubt we should have followed this course. But there is one character which perhaps belongs peculiarly to Anthropologists—viz., the feeling of duty, combined with a nearly irresistible inclination to defend themselves when they believe they are unjustly attacked. But while it is the character of the Anthropologist to defend himself every now and then, he is at the same time a lover of peace, and would never enter into contentions unless really obliged. With regard to the British Association, let it be most distinctly understood that we have no charge or grievance to bring against that body. There are some men who, utterly ignorant of our real feeling and position, will not hesitate to declare that we are in search of a grievance, and that we desire to make ourselves martyrs, and the authorities of the Association our persecutors. Nothing, I feel sure, is further from our desire or from our intentions, than to complain of our present position. We have too much respect for our science, and too high an estimate of Dundee to appear in any such character. We all feel it, however unfortunate, that up to this time it has not been found convenient, or perhaps thought desirable, to have a separate Section or Department in which all the Students of the Science of Man could meet together and discuss subjects in which they are mutually interested. I have heard it hinted that we demand that such a Section or Department shall have the name Anthropology. This supposition is wholly erroneous. We merely express a hope that, in a great national body like the British Association, it may be found convenient at some early day to have a special Section devoted to the Science of Man and Mankind. In the meantime it has been thought desirable that an attempt should be made to bring a few students of the Science of Man together, by holding two or three meetings to discuss questions in which we all feel mutually interested. If I had thought such a course would be likely to produce dissensions amongst students of the same science, I for one would have taken no part in it. So fully am I convinced that the real progress of science is best advanced by a friendly, although entirely free, interchange of sentiments, that I should ever deeply regret that our present meeting should have this effect. Feeling, however, no fear on this point, I will proceed to touch on the aim and method of the Science of Mankind, now known in the greater part of Europe under the name of Anthropology. My brother Anthropologists will pardon me if I take this opportunity of merely explaining the aim and method of the Science. Before the conclusion of the sittings I trust to be enabled to lay before them a few remarks on a subject in which all modern Anthropologists are so intensely interested, viz., the Principles of Anthropological Classification. Nor do I think our time will



be entirely wasted if we once again consider, in an apparently hostile atmosphere, what are the objects we propose to ourselves by studying the past history and present physical and other characters of those beings called Men. Whether or no, however, Anthropologists may be agreed on the aim and method of their Science, it is equally certain that the great majority of the public generally, and perhaps of the British Association, do not yet fully understand either our aim or our methods. The past confusion of our Science in the meetings of the Association is purely the result of the want of some general agreement on this point. It is the knowledge that this is the real cause of our past and present difficulties which inspires me with the hope and expectation of bringing about a change which will be agreeable to all parties, and which, I contend, would do much to advance general science. Now, the aim of the Anthropologists is to build up a science under the title of Anthropology or some other denomination. The astronomer studies the motions and laws regulating the starry firmament; the geologist studies the laws regulating the formation of the crust of the earth; the botanist the laws regulating the formation and development of plants; the zoologist the laws regulating the formation and distribution of animals; and the Anthropologist studies the laws regulating the formation and distribution of mankind; and they each profess to do it by the same method. The Geologist unfolds the laws of the past by a study of the laws of the present; and the Botanist, Zoologist, and Anthropologist do the same. The science of Geology has for its object the discovery of the laws regulating the past history of the earth; the Botanist the past history of plants; the Zoologist the past history of animals; and the Anthropologist the past history of man. Anthropology, then, has for its aim both the present state and past history of mankind. In days not long passed, it was thought that the Geologist had no right to attempt to discover the past history of the earth, and even down to this very time there are, I believe, persons who think that it is not right scientifically to attempt to discover the past history of plants, animals, or mankind. Botanists and Zoologists, however, seem to be allowed to go on very quietly with their investigations; and why not allow Anthropologists to do the same? Their aim and their method are, or ought to be, identical. Two objections are, however, raised to these views from two opposite and mutually destructive grounds. One very large party say—as they formerly said of the study of the laws regulating the formation of the earth's crust—that the natural history of Man should not be studied, and for exactly the same reasons. But, if we consult the works of any modern writers who enjoy a deservedly high reputation amongst the public, like Professor Owen, we find it there clearly and distinctly asserted that Mankind is a proper object for study, description, and classification. The late Dr. Prichard, up to the year of his death, was urging a recognition of the science of Man by the Association. After a contention of many years, he succeeded in attaining a sub-section, or department, of the zoological department. The name introduced into the Association still remains, but let me ask any impartial member of the Association or of this Conference,

whether the natural history of man at present receives that attention and consideration which its importance and interest demand? The difference between the authorities of the Association and Anthropologists does not consist of diversity of opinion respecting the scientific study of man; the only difference is respecting the importance and position which shall be assigned to the Science. Anthropologists profess to make mankind a subject of scientific study—the British Association do the same. If, therefore, the natural history of mankind is not a suitable object of scientific study we are not to blame. The other party contend that Man is merely an animal, and that it is not necessary that he should be studied separately. The Anthropologist disagrees with both propositions, and occupies a moderate and entirely scientific position. If Anthropology is not less important than Geology, Zoology, or Botany, why should it have an inferior position? We consider that we are doing a real service to Science by endeavouring to remove the anomaly now existing in the Association respecting our Science. We hoped that what took place at Birmingham would have settled the matter: but no permanent settlement will, or can, take place until Ethnology and Anthropology be united in one department. On behalf of Anthropologists, we are much indebted for the defence made by the Rev. George Gilfillan. But, unfortunately, he defended them as though they had some theory to support. If they had a theory to support, they would have deserved all the hard things said of them, and would have had no claim to a place in the British Association or any other scientific body. There were as many theories respecting Anthropology as there were Anthropologists. Cardinal Wiseman was once asked if he thought it desirable that persons of the Roman Catholic faith should attend the Anthropological Society. He replied, "Yes, listen and say nothing, and when you are all agreed come and tell me." Anthropologists were not likely yet to be agreed on anything connected with their science. Theologians would do well to follow Dr. Wiseman's teaching. Science was by its nature progressive. The attempt to reconcile it at every stage of its existence was most absurd. It was said that the Scotch could not bear suspense. But suspense was the normal condition of all truly scientific men. The fact that there were eminent Scotch scientific men sufficiently refuted such a charge. Some had charged Anthropologists with having advocated the ape origin of man. But he hardly knew a single Anthropologist in England, or indeed on the Continent, who has not declared that the position of Man's place in Nature, as propounded by Professor Huxley, had been discussed too early. They had met together to discuss scientific questions, entirely irrespective of what might be the local feelings regarding them. There did not exist different opinions for London and Dundee. Two principles were found necessary by Anthropologists in London—to be obeyed in all papers and discussions. First, no theological or religious questions were allowed to be attacked or defended; and secondly, discussion was allowed as to the tendency of their Science. He should not attempt to disguise the real character of Anthropology. The introduction of Anthropology as a purely inductive Science was no doubt to some extent a revolution

in general Science. It had made its appearance in Europe when Metaphysics and Philosophy had become blended with Physiology—producing the bastard science known under the name of Phrenology. Their duty was to found a science of man on comparative Anatomy, comparative Physiology, and comparative Psychology, entirely free from all Metaphysical assumption. Besides this, to found the Science, it was necessary most minutely to study Man's past works. All branches of Science had to be compared before they could found a really lasting theory. They had no pet theories to support on any of these questions; no sensational papers to introduce. They were met together for work and for mutual instruction. Of all their facts and all their deductions, they invited the most rigid investigation and criticism. They craved for liberty to be allowed to discuss scientific questions simply and solely as such. Before the end of this meeting it would (he thought) be seen how grossly, yet no doubt unintentionally, their objects had been misrepresented. They had three objects in holding this Conference. First, that they might have a chance of meeting together; secondly, to remove the vast misconception existing in the public mind regarding this Science, and thirdly, to show that although disappointed they were not disheartened—and I think that what looks like misfortune may, by judicious conduct on our part, turn eventually to the benefit of our Science. Whatever might be the future of the Science of Man in the British Association, it should not be a failure for want of zeal on our part. We endeavour to give it that importance to which it is fully entitled. In conclusion (he said) I would invite those who will persist in attacking us, and endeavouring to raise a feeling of disgust against us, because of our adherence to Darwinism—to earnestly look at the real facts. If they will do so, they will find that if there be one society or one body of men who have more earnestly, more continually, persisted in attacking and endeavouring to refute the doctrines respecting man's origin by Mr. Darwin, or either of his disciples, that body is composed of men calling themselves Anthropologists. Nearly every objection of a scientific character which is to be found against the Darwinian theory of man's origin is to be found in the publications of the Anthropological Society. These statements I put forward as facts, and not as our justification, much less of anything of which we ought to boast. It so happens, however, that for nearly five years the publications of the London Society of Anthropology have teemed with objections to the Darwinian theory of the origin of man. From the first to the nineteenth number of the *Anthropological Review* just published, you will hardly examine a number without finding some objection to this theory. So great and so continued have been the objections we have continually raised against Darwinism, as now being taught in this country, that it has been our misfortune to have failed to gain the adherence of the great mass of Mr. Darwin's more immediate disciples. Professor Huxley for five years has been our most deadly, and sometimes even our most bitter, foe. He has on more than one occasion declared his hostility to us; while, on our part, our attacks on the views of Professor Huxley have been of the same deadly and

perhaps bitter character. Last year Professor Huxley came to Nottingham, but, I am well assured, out of no love to us, and much less with any fear; but, I believe, as a mere act of justice, he used his influence to improve the position of the Science of Man in the British Association. Our conduct looks like ingratitude, for we have never ceased to attack his views. A fact or an expression of opinion has only to appear against the Darwinian origin of man when it at once seems to find its way into the pages of the publications of the Anthropological Society. If the Society, as a body, have shown unanimity of sentiment on any one point, it has been, I believe, against the Darwinian theory of man's origin, as propounded by Professor Huxley, being warranted by the facts already known. For my own part, I have felt for some time that enough has now been said by us against the views of Mr. Darwin and his English disciples. Let it, however, be well understood that in attacking the views of Mr. Darwin and Professor Huxley we do not in any way relinquish that feeling of admiration and respect for their labours which every man who has the honour of his country at heart cannot fail to feel. Mr. Darwin is a man especially on whose labours no real student of Science can look without the most intense satisfaction and gratitude. His work on the *Origin of Species* is one of the most glorious and most praiseworthy publications of the nineteenth century; while Professor Huxley is a man who is one of the hopes, and, I trust, glories of British Science. He is a man who has shown that he will render justice to his direst foes. His conduct last year in our behalf gained for him the admiration and applause of not only every Anthropologist in this country, but of most of the leading scientific men of Europe. The simple act of justice on his part was thought by many to be an act of generosity. On the opinions of Professor Huxley we look as we ever did; but our admiration for the character of the man has, with one accord, all been greatly intensified from this generous and manly act. The present state of feeling with regard to Anthropology among scientific men, and also amongst the general public, arises, I believe, from an entirely mistaken notion respecting its aim and method. When it is once fully realised that it is purely a science of induction—when it becomes known that we have no theory to support, and only use hypothesis to be better able to classify our facts, and are ever ready to change our theories when the discovery of new facts warrants our doing so—then will the time come when we may hope that Anthropology shall receive that support from all classes of society which its importance demands. Let those once fearless champions of geological science and of other sciences but once fully realise our object and our method, they will at once come forward to extend the right hand of fellowship to us. Our great men of science, who direct the affairs of the Association, have not yet, I think, sufficiently examined into this matter. I trust that they may now be induced to do so. We in this country know too well the position which the science of Anthropology takes in France, Germany, and, indeed, wherever science exists, to allow ourselves to be daunted by difficulties or abuse. The students of the Science of Mankind in Great Britain feel, with their colleagues in other lands, that a general scientific body without the

Science of Anthropology, is like an arch without the keystone. We shall be content to wait in patience until this is seen and felt by others. In the meantime we intend to go on with our work. We neither court the applause nor fear the censure of any one. I hope and believe that not one sentence will be said here which can justly offend any one who favours us with his company. It is not our habit or custom to willingly do violence to the feelings of others. We commence our labours to-day, and I trust to the good feeling of the people of Dundee, and the good sense of those who take part in our proceedings, to make our meeting at Dundee memorable for the recognition it gives to the Science of Anthropology. I trust the people of Dundee will cease their attacks on our Science. Attack our facts or opinions as much as you feel inclined, but, for your own sakes, and for the credit of your country, do not longer attack the Science. We seek to discover from actual facts these laws regulating man's nature and development, not because such discoveries will lead to our material interests, but because we believe the discovery of these laws will form the basis of correct principles of human happiness; and, as these laws become fully established by scientific inquiry, misery and ignorance will have to give place to civilisation and enlightenment.

JOHN PLANT, Esq., F.G.S., F.A.S.L., proposed a vote of thanks to Dr. Hunt for his address. He said he had to ask the meeting to agree that the explanation by Dr. Hunt of the position and objects of the Anthropologists was satisfactory and worthy of acceptance by those present. Some might imagine that the Anthropologists desired to place themselves in opposition to the British Association, or to make themselves independent thereof; but such was not the case. They simply desired to assert the claims of Anthropology as an independent science. They merely wished that it might next year and thereafter be allowed its proper prominence in the programme of the British Association. He, for his own part, had heard a good deal before arriving at Dundee of the prejudice existing in the town against Anthropology, but he scouted the idea that any such narrow-minded views belonged to the inhabitants of so important a city. He thought rather that such prejudices had been imported by those accompanying the British Association from the south, than that they pertained to the banks of the Tay. He did not want to know the motives that have made the British Association jealous of anthropological science, but at all events he did not wish the papers he had prepared in connection therewith read in departments such as anatomy or zoology. He was sorry that there was a virulent discussion in the Dundee papers in connection with anthropology last year. He did not believe that newspaper discussion of scientific subjects led to much use. He had taken part in them himself, and felt all their bitterness and futility. The theories, foisted and fathered upon the anthropologists by enemies and quasi-friends, had disparaged their science in the estimation of some, but truth reverently followed up, and nature humbly and patiently investigated, would always have partisans. He did not fear for the future of anthropology if they only pursued their science by the method pointed out by Dr. Hunt.

Dr. GRIERSON said he had much pleasure in seconding the vote of thanks to Dr. Hunt. Last year at the British Association meeting at Nottingham he had on some points opposed Dr. Hunt. That gentleman had read from authorities in support of his views, and he had thought justified in quoting Biblical testimony in reply. Dr. Hunt had said he and his friends had never intended to make and never would make any attack on theology. All he would say, therefore, in conclusion, was that if there were no new attack there would be no defence. He trusted and fondly believed that anthropology and Christianity would be found to go hand in hand. At all events, if one word were said in Scotland against theology there were ten thousand Scottish tongues ready to defend it.

Dr. PAGE next addressed the meeting—If it were asked, he said, why a lame and disabled man like himself should be present on this occasion, he would answer at once, that he came there to raise his voice, feeble as that might be, in the cause of science, and to protest, at the same time, against the inconsistency of the Council of the British Association. He would not, indeed, have been present in Dundee had he not learned a few days before of the attempt to extinguish, in his opinion, one of the most important sections of the Association. He would not enter into the history of the long struggle which the anthropologists had had to establish their position in the Association, and which had already been adverted to by Dr. Hunt; but every one must be convinced of the glaring inconsistency of the British Association in having opened the door to them in 1866, and, without any reason assigned, closed it against them in 1867. What circumstances had occurred, he would ask, since 1866, either in the history of anthropology or in the conduct of its supporters, to have led to this result? This was a question to be answered by the Council, and in an Association professing to be for the advancement of science, the public would look for a distinct and unmistakable reply with no little interest. It was true they had been told the problems of anthropology could be discussed at the Biological, or the Geographical, and Ethnological Sections, and so far as man was a mere animal that might well be. But man was something more; he had, over and above his fellow-creatures, an intellectual, moral, and religious nature. He was a fabricator, not merely of mechanical tools, by which he became a modifier of nature, and, to some extent, a sub-creator; but he was also the inventor of intellectual tools—of political, social, moral, and religious schemes, by which he secured the elevation and advancement of his race—thus separating him immensely from the lower animals, and placing him in a category that could not be properly considered either in a Zoological or Ethnological Section. And what, after all, was it that anthropology sought after? Why, the natural history of man; and if they were free to investigate the nature of plants and animals without let or hindrance, much more were they entitled to do so in the case of man. Every man in the town had his individuality corporeally and mentally. They could not all become poets or painters, mathematicians or astronomers—and just as surely as men had their individuality, so had nations, and it was individual



character which was the highest aim and object of anthropology. So long as nations had this individuality, the same causes that were operative on one race would be totally ineffectual in another; and not till these peculiarities had been established could commerce, or missions, or education, have their first or legitimate effects. People talked of civilisation, of admixture and amalgamation of races, but there could never be amalgamations where nature had established wide racial distinctions, and all such attempts either ended in failure, or, what was worse, often in the debasement and degeneration of the higher race, which vainly sought such amalgamation. He need not point to South and North America as striking examples of this truth in opposite directions. Such, among many others, had he time to enumerate, were the uses of anthropology; and what, he would ask, therefore, was the cause of the odium which the science had on this occasion incurred? There was no use of blinking the matter. The Council were evidently pandering to popular prejudices, and striving with uneasy tenderness to get rid of a difficult subject. He had no wish to offend prejudices where he had little chance of establishing convictions; but if these prejudices stood in the way of truth then offended they must be. The anthropologist had his convictions and opinions like other men; but with this difference, that their opinions resolved themselves into creeds, while his only remained with him as beliefs. A creed subscribed to and bound to be defended as a thing final and irresistible, was one thing; a belief entertained according to present knowledge, but liable to be changed as newer knowledge was acquired, was a thing altogether different. It was this war of a creed and the search after further truth that lay at the bottom of the whole matter. It was the setting up of Oriental cosmogonies of four or five thousand years ago, against the newer knowledge which science was every day earnestly, anxiously, truthfully, and prayerfully endeavouring to reveal. It was the old question of reconciliation—the attempt to harmonise what could never be harmonised without committing treason against science and dishonour to religion. If there were to be reconciliation let their opponents attempt it; as for them, it was enough to labour after the truth, as revealed by the facts and phenomena of nature. And, finally, if there was anything irreverent or irreligious in the matter, that irreligion must rest with those who would thus vindictively endeavour to thwart the search after truth, and to repress the aspirations of the soul and intellect after a knowledge of the Creator, as revealed in his highest and noblest creation, Man, and in his relations to God, to his fellow-men, and to the beautiful world by which he was surrounded.

Dr. HUNT, in a few words, expressed his pleasure at the vote of thanks that had been accorded to him, which was the more enhanced from the circumstance that it had been seconded by, as he believed, his sincere and honest opponents of last year. Dr. Hunt then announced that the Section would hold its second meeting on Monday, at three o'clock, and in the same hall, when several papers of interest would be read and submitted to discussion—the tickets of the British Association giving admittance.



The opinions expressed by the local press, or by correspondents of newspapers on the spot, will perhaps better indicate the effect of this first and only meeting of the Conference than any remarks of our own.

The anthropologists, before this meeting, were denounced for "holding a theory"; now they were denounced in like manner because they had no theory. The following leader from the *Dundee Courier* appeared the day after the first meeting of the Conference. It runs as follows:—

"AN UNSCIENTIFIC SCIENCE.

"The anthropologists, denied the privilege of having a department to themselves by the Council of the British Association, have set up on their own account. They have taken the Union Hall, where they held a conference yesterday, and are to meet and read papers and discuss on the first three days of next week. Perhaps some of our readers—the non-scientific portion—may ask, What is anthropology, and why is it denied a sub-section by the British Association? The definition given by those who profess to know is that it is 'the science of man.' We are not quite sure that that will make the matter any clearer. It is only shifting one name for another. The explanation stands in need of being explained. We are doubtful if we shall quite succeed in an attempt to be explanatory, for the anthropologists themselves seem to be rather misty as to exactly what anthropology is. There is a sad lack of precision among them, and an utter want of agreement. According to Dr. Hunt, the president of the Anthropological Society, who yesterday delivered the inaugural address, there are in London about eight hundred members of the Society, and probably no two of them agree in their conclusions. They have no creed, and not even a theory. Dr. Hunt does not deem that a disadvantage. Indeed, he vaunts it as a merit. If anthropologists had a theory, anthropology would not, in his judgment, be worthy to be called a science at all. It is this absence of a theory which makes it scientific. The old meaning of the word science, which used to, and still does, among such scientific men as the Association permits to meet in sections, imply settled knowledge, is abandoned, and science, anthropologically considered, means an uncertain groping among facts, and either a Babel of conclusions or a chaos of inconclusiveness. The idea has novelty to recommend it, but we apprehend that is its sole recommendation. The anthropologists, however, do not do justice to themselves. Anthropology, if it is not yet, aspires to be, a science of the most ambitious order. It is to deal with man in all his relations, and consequently with all the things to which man is related. 'The Science of Man' is too modest a title. It is a science of the universe that is aimed at. Anthropology, to be complete, must be all the 'ologies' in one. The Anthropological Society, to answer its purpose, must absorb the British Association and all its sections. The undertaking is a gigantic one, and we only hope Dr. Hunt and his colleagues may prove equal to it. We may easily apprehend, then, why the Council of the Association refused a sub-section to anthropo-

logy ; but that perception only throws us across a difficulty. Why did the Council last year at Nottingham allow an anthropological subsection to be formed ? If it was good for Nottingham, why is it bad for Dundee ? The answer, we presume, is, that there is a general opinion that religious feeling is not so strong in England as in Scotland, and the rulers of the Association had to arrange its sections with reference to its geographical position. We may at once appreciate the compliment paid to us Northerners, and perceive the fact that the savans owe any embarrassment they may have suffered to their own imprudence. There is an old tradition to which it might be worth the while of even philosophers to pay attention. It is, that evil spirits never come across our thresholds unless we invite them in. If an anthropological department had not been formed, we should not now have anthropologists in our midst with, if not a grievance, the appearance of one, and a grievance, too, that is very apt to awake popular sympathy—the grievance, to wit, that free discussion is being stifled. Next to the apparent unwisdom of giving anthropology, as Dr. Hunt describes it, a department, is the unwisdom of banishing it. If the latter step had not been taken, those who have gained the opportunity of making themselves conspicuous would probably have remained unheeded, if not unnoticed. As it is, it is not unlikely they will attract larger audiences than any of the sections. The affair may furnish us with another instance of mending a hole and making a bigger one. Even philosophers do not always avoid getting ‘out of the frying-pan into the fire.’ If we may accept Dr. Hunt’s statement, the unwisdom is even worse than we have pictured it. He says that if anthropologists uphold a theory, there are theories to which they are antagonistic. They do not believe that our ancestors were apes, and they are opposed to Darwin’s theory of the origin of species. If that be so, the anthropologists owe a debt of ingratitude to the friends who have defended them, for they have certainly by those friends been represented as holding, or at all events favouring, the doctrines Dr. Hunt disavowed. But then there is room for just a faint suspicion that the Council of the Association had some reason to doubt the prudence of introducing anthropology to a Scotch public, and that Dr. Hunt’s address has been written with just a tinge of a desire to suit the latitude and longitude of Dundee. The man of the greatest weight among the speakers was Mr. David Page of Edinburgh, who has some reputation as a geologist, and he plainly enough indicated his feeling that anthropology is opposed to the Mosaic account of creation. It may be that, as the anthropologists have some hundreds of theories among themselves, and no theory in common, Dr. Hunt gave expression to the real state of his feelings ; but as Mr. Page will probably take a prominent part in the proceedings, and as he is not inclined to suppress his antagonism to “certain cosmogonies,” the Council of the Association may have an opportunity of seeing how unwise they were at Nottingham, and how unwisely they have in Dundee endeavoured to escape the results of their unwisdom.”

On Monday afternoon the special correspondent of the *Edinburgh*

*Daily Review* writes as follows, and very similar accounts appeared in other papers :—

"I thought that I should have to-day to send you an account of another meeting of the Anthropological Conference, but I am relieved from that task. The Anthropological Conference has come to an end. Its first meeting was also its last. You are not, however, to imagine from that the anthropologists have been defeated. The fact is, they have won a victory, if not a decisive and complete one. They have secured such a compromise as is in effect a triumph. How that has happened I may, perhaps, profitably occupy some of your space in explaining; for, if I am not mistaken, this passage in the history of the Association is not only significant of the present, but also fore-shadows the future.

"The anthropologists, before the commencement of the proceedings at Dundee, were visited by apprehensions that anthropology was not to have the same favour accorded to it this year as it received last year at Nottingham, when the so-called science had a department to itself. They expected it was to be, if not snuffed out, crammed up into a corner and discouraged. I am inclined to think they were not without some grounds for their fears and suspicions. Men have to accommodate themselves to the circumstances which arise out of their geographical position, and these circumstances are mental and moral as well as physical. The tendency is expressed in the adage which bids those who go to Rome to do as Rome does. There are among the leaders of the British Association, as well as of all other associations, 'politic' men, and it is not unreasonable to infer that they thought anthropology would not be well received in Scotland. Perhaps that impression, if it was not originated, was strengthened by the fact that a Dundee newspaper had, in its correspondence respecting the Nottingham meeting, spoken of anthropology and anthropologists in anything but a flattering manner. So this year the anthropologists were not to have a department. Ethnology and geography were put together, and the anthropologists were to have their papers read in that section, or in the biological or geological section, according to the special character of the contributions. 'Divide and conquer,' is an old maxim of polity, and in this case it was modified to 'Divide and make safe. What was deemed a dangerous element, instead of being concentrated in a body, would thus have been scattered, and would not have been so powerful or conspicuous as if united. But you know what often happens to 'the best laid schemes of mice and men.' So in this case the plan—if there were a plan, and I think there was one—failed. It did worse than fail. Not only was its purpose not attained, but, as its direct consequence, the anthropologists became far more conspicuous than they would have been if a section had been assigned to them. They gained the opportunity of making a noise and attracting notice, and I need hardly say that is worth something to a party which is anxious to make its way in the world, and has the boldness and dexterity necessary for seizing and using any opportunity that may be presented to it.

"The way in which the opportunity was used shows how very small a lance may produce a great effect. An invitation was sent to the anthropologists to visit Dundee. Probably not more than a score of persons knew of the step, and they, although they are respectable in their stations, are not men of mark, position, or influence. The invitation was accepted, a 'Reception Committee' was formed, the anthropologists arrived, and a cry was got up that free discussion was being smothered. There was an apparent pretext for that cry, though it seems to me only a pretext, for if there had been anything more the paper of Mr. Crawford on the Antiquity of Man, and that read to-day by Sir John Lubbock 'On the Origin of Civilisation and the Early Condition of Man,' would have been excluded. But for an effective cry a pretext is often sufficient, and having got that, the anthropologists were provided with a fulcrum. They took a hall, issued their programme, and held their preliminary meeting on Friday. To-day they were to have commenced their 'business.' Three o'clock was fixed for the hour of meeting—a skilful device. If the Conference had been held at eleven o'clock, when the sections open, the anthropologists, many of whom are members of the Association, would have had either to have left anthropology to itself, or have given up attendance at the sections, and the audiences might have been thin ones. But the Conference beginning when the sections closed, the anthropologists would be at liberty, and the public unoccupied. The result would, I believe, have been that the hall would have been filled, and that doctrines, which those who believe the Bible to be true cannot help regarding as false and pernicious, would have been placed before a large number of persons. The very fact that the subject is a dangerous one would have been an attraction. The idea that it was forbidden would have roused and stimulated curiosity. It is useless to attempt to conceal that here very considerable interest has been awakened. On Saturday, though there were so many excursion parties, the hall filled to hear Mr. Crawford on the Antiquity of Man; and to-day, when Sir John Lubbock read his paper, the room was so crowded that I had hard work to push my way into a place. The assemblage, too, was composed of the very *élite* of Dundee society, and the closest attention was paid to the paper. I do not wish you to infer from that that anthropological doctrines are gaining acceptance, but I do desire you to understand that great curiosity is being manifested about them, and that considerable attention is being paid to them. No one who observes what is going on here can come to any other conclusion. I would write otherwise if I could, for the doctrines are to me abominable, and they are as weakly supported as they are bad; but then, weakly as they are supported, there is no strong opposition to them. That would not have mattered so much if the topic had not been pushed into prominence by the circumstances I have mentioned; but as it is, there may be, especially among the young, a crop of evil results.

"The position the anthropologists had gained by securing the attention of the public to their Conference promised such present advantages, that there is room for some surprise at their giving it up; but I

presume they have looked forward to the future. At the end of last week negotiations appear to have commenced between them and the authorities of the Association, the result of which is that anthropology is to be recognised. The anthropologists, geographers, and ethnologists are to be combined in a section. Thus the anthropologists, with such a weak lever as the Reception Committee, have forced the hand of the British Association, which, for the future, will number among its scientific departments one devoted to a science which has no theory, the students of which are without unity of view, and which in any, or every one, of its aspects is antagonistic to the Mosaic account of creation."

On Tuesday, September 10th, the following leader appeared in the *Dundee Courier*, and will indicate the change of tone in which the action of the anthropologists was received by the local press. It is headed thus:—

"SKILL AND FORCE.

"The affairs of this world are decided at least as much, if not more, by skill than by force. That is true even of physical conflicts, but it is still more certain in its application to mental contests. It is on record that Lee, when he faced Grant in that last desperate struggle in Virginia, had at no time more than thirty thousand men to oppose to the hundred of thousands in his front. Dr. Hunt, the leader of the anthropologists, if we may estimate him after the world's fashion, by results, is a better strategist than General Lee. The anthropologists bear, perhaps, about the same proportion to the British Association as the handful of Confederates did to the multitudes of the Federals; but while Lee was defeated, Dr. Hunt has won. It must not be forgotten, however, that this anthropological tactician had an advantage which Lee did not enjoy. Grant never placed his army in a false position—the Association was committed to one. If the anthropologists had never been accorded a department, they would not have had that weapon which we call a grievance. But having been formed into a department at Nottingham, and not being recognised at Dundee, they were able to cry out that they had been 'suppressed,' and to demand the reason for the 'suppression.' The demand was a very inconvenient one. The department had been 'suppressed.' There could be no doubt about that. The proof was patent. So far as the arrangements of the Association were concerned, Anthropology had been, but was not. It might not have been difficult to say why it was not; but it might have been disadvantageous. If the reason is not to be sought in mere caprice, and that we do not believe, there was but another alternative. It was because the Association this year meets in Scotland, and the northern latitude was supposed to necessitate certain conditions, of which the 'suppression' (that, we think, was Mr. Page's expression) of anthropology was one. But it would never have done to have said that. So the Association when it was accused was practically defenceless, because its only defence was worse than a plea of guilty. They had committed themselves at Nottingham.

They could not justify the retracing of their steps at Dundee except by a mode of justification more damaging than silence.

"The anthropologists, then, had a vantage-ground from which to act; but they required something more. If it be allowable to employ, figuratively, a term which belongs to mechanics, we should say that the anthropologists wanted leverage. They could not act on the Association from within. If Dr. Hunt had proposed an Anthropological Section, he would not, as we understand him to say, have found a seconder for his motion. They had to act from without, and, like Archimedes, they needed a fulcrum. More fortunate than Archimedes, they found or made one. A Reception Committee was formed to invite the anthropologists to Dundee, to receive them when they came, and to co-operate with them while they stayed. It is that Reception Committee that especially impresses us with the truth of the saying which attributes great events to small causes. We are sure the members of that committee will agree with us in saying that they possess but small public influence—so little, indeed, that it would have been deemed absurd to suppose they could have turned the British Association from its course. But a small stone may throw a large train off the rails. With the grievance of 'suppression' for lever, and the Reception Committee for fulcrum, the anthropologists have shaken the Association, and we are informed authoritatively that negotiations are going on with the view of recognising anthropology and embodying it in a section. Mr. Walpole negotiated with the Reform League, and Hyde Park is available for public meetings; her Majesty's Ministers are assumed to have trembled before Mr. Beales, and so we have a Reform Bill. What wonder, then, if the Association has succumbed to Dr. Hunt and his friends, and anthropology is to have a place. Whatever may be the case with respect to anthropology, which Dr. Hunt informs us has none of the elements of a science, there is one art which has been brought almost to perfection—it is the art of agitation.

"It is impossible not to admire the politic moderation exhibited by the anthropologists. They had secured a position which in Dundee would have given them greater advantages than a part of a section would afford. What with their grievance, which had enabled them to make a noise, and the subtle attractions of a subject of doubtful propriety, they would probably have had larger audiences than any of the sections; but, like wise men, they sacrificed the present to the future. If they had not made peace, they would have had to make the same efforts every year, and while their lever of grievance would, as time went on, have become weaker, a fulcrum might not always have been available; but, by negotiating, they have made themselves a part of our great National Scientific Association, and gained a permanent stand-point from which to preach a science without a theory, to followers, no two of whom have views in common. It is seldom we have such an instance of how the mighty may be coerced by the comparatively weak, when the mighty begin by putting themselves in the wrong, and then struggle to evade the consequences without openly going back to the right."



We have no space to dwell further on the notices given of this meeting of the Dundee Anthropological Conference. Nor shall we here dilate on the future hopes of anthropologists in connection with the British Association. On one point, however, we do feel it our duty to express our opinion, viz., on the continuance of the meetings of such a conference. Our readers will remember that at Birmingham a letter was read from Professor Owen, in which he strongly advised that anthropologists should annually hold a Conference or Congress, and that such a recommendation was supported by so veteran a public scientific caterer as Sir Roderick Murchison. This year the Duke of Buccleuch has given it as his opinion that the number of such associations as the British Association ought to be increased. We cannot but think that the anthropologists in this country are very grateful for these hints. The time may not be far distant when such a Conference may be held. But let it not be supposed for an instant that anthropologists will ever give up the claim of having their natural place in a national scientific association. We are glad to know that on this point there is no difference of opinion amongst anthropologists, whatever may be the wishes of some of the elder members of the British Association.

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#### ANTHROPOLOGY AT THE BRITISH ASSOCIATION.

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On an occasion when, for good or evil, anthropology, as a science, has not been encouraged by the British Association, it seems at first sight incorrect to head an article with the title so familiar to the readers of this *Review*. But it is quite impossible to exclude the science from the arena of section E, although nominally it has been "left out in the cold." Wherever the study of the science of man receives any support, there necessarily must anthropology be present, and the meeting at Dundee had its share of anthropological papers contributed by various gentlemen. It is only to be regretted that, with very few exceptions, none of these papers were new. All Mr. Crawford's papers had been long familiar to the scientific public. Perhaps it is good policy on the part of the writers of these papers to attempt a larger popularity for them than they might otherwise receive, but it is a poor compliment to the scientific parliament of Britain to set such long-preserved meats before its members as solid



fare. In the following report of the papers read, the previous use of them has been indicated.

Probably the most novel feature of Section E on the occasion was the opening address of Sir Samuel Baker, from which, as our space precludes the insertion of the whole, we shall offer a few extracts, contenting ourselves with a summary of the rest. After some preliminary remarks, in which Sir Samuel adverted to his own labours on behalf of scientific discovery, he proceeded to dilate upon the subject of geography, asserting that it was closely interwoven with theology; and that from the creation, to quote his exact words, "the very elements of our creed are connected with particular positions upon the earth's surface." Geography promoted Christianity, the speaker intimated, and after a survey of the early migrations of races, he says: "All this wonderful train of progression is based on geography;" "thus is religion linked with the study of the earth." We must confess that eloquence such as this tempts us to the inference that Sir Samuel had the fear of Dundee before his eyes; and the following passage leads us to think that perhaps the distinguished traveller was disposed to be slightly sarcastic upon theological ideas associated with districts north of the Tweed:—

"When we consider," he says, "that the Mosaical history accounts for 4004 years from the creation of the first man until the birth of Christ, and thus establishes the recorded existence of man for a period of 5,871 years to the present day, we must regard with the most intense interest the mysterious development of the world during that space of time."

This and similar utterances we cannot but suspect to be calculated for the latitude of Dundee, and hardly the serious opinions of the speaker, who cannot be supposed ignorant of the discoveries to which a better knowledge of chronology has conducted us. When a Bunsen, whose orthodoxy no one will question, has not hesitated to assign longer periods for the evolution of Egyptian civilisation, we cannot suppose a Baker ignorant of the fact, and therefore we feel somewhat smitten by the tone of irony here adopted. Sir Samuel then, in a masterly way, gave a brief review of the advancement of geographical knowledge, paying a graceful tribute to the patronage extended to that department of human energy by the venerable Sir Roderick Murchison; adding, however, with great sincerity, that "no striking geographical feat has been performed by England during the past year." This is unquestionably true; and it is somewhat remarkable that, at a time when Abyssinian geography is so great a want, we find scarcely a guide of any trustworthiness to aid our troops on the expedition to which they have been impelled by a series of blunders,

political and scientific, unexampled for their enormity. Sir Samuel differed from Sir Roderick Murchison respecting the fate of Livingstone, believing him to have met his death. In an eloquent peroration, the President, with great good taste, confining himself to geographical matters, bore testimony to the efforts made at home and abroad for an extension of our surface knowledge, prudently saying nothing on the subject of the science of man, which shares with the elementary topic of geography the attention of the frequenters of section E.

A vote of thanks to Sir Samuel Baker was proposed by Sir Roderick Murchison, who congratulated the section on "the progress geography had made from the beginning of time," and seconded by Mr. John Crawford, after which the section began its labours for the meeting of 1867.

A paper, by Lieutenant S. P. Oliver, R.A., on the "Communication between the Atlantic and the Pacific," was then read, in the course of which the following amusing cross-examination of that gentleman was conducted by Mr. Crawford in his happiest style:—

MR. CRAWFURD said that Lieutenant Oliver had, no doubt, had excellent opportunities of forming an opinion upon the comparison between the red men of America and the black men of Africa, as he had seen them in Madagascar. He would like to know which of these races Lieutenant Oliver preferred.

LIEUTENANT OLIVER: I think that is a very difficult question indeed.

MR. CRAWFURD: That is just the reason why I put it.

LIEUTENANT OLIVER was sorry he had given that subject very little of his attention; but he might say that the men who were with him, and who were their best men when cutting through the forests, were men from Africa, who had been imported as slaves several hundred years ago to some island in the West Indies. They made themselves troublesome there, and were placed by some government, whether English or Spanish he did not know, on the coast of Mosquito. Ever since that they had followed the occupation of mahogany-cutters, and there were no better men in the world. The Indians there were a useless set; they had, perhaps, never been developed. They followed hunting, shooting; and fishing, and all they cared for was to provide for their physical wants. During the dry season they laid up provisions for use during the wet season, and that seemed to be the utmost of their desires. The black men with whom he had been acquainted at Madagascar, were also widely different from the negroes he met with in Africa. The people with whom he had most to do in Madagascar were of the dominant race, and were of a superior class.

MR. CRAWFURD: You saw a great many monkeys and a great many savages. Did you encounter anything in the missing link between man and the monkeys?

LIEUTENANT OLIVER: No, certainly not.

MR. CRAWFURD: I see you have been eating lizards and iguanas. What like is iguana flesh?

Lieutenant OLIVER: Iguana flesh is like what I would imagine the flesh of a young child would be.

Mr. CRAWFURD: Did you like it?

Lieutenant OLIVER: Well, we were generally pretty hard up when we ate it.

Mr. CRAWFURD: You would not have eaten a young child, I suppose, in the same circumstances?

Lieutenant OLIVER: Well, I don't know.

A paper on the "Ethnography of the French Exhibition," by Mrs. Lynn Linton (previously read in London), was then read, but it contained nothing of special interest to anthropologists.

The following form some of the most important papers contributed to section E by various gentlemen, with the discussions thereon:—

*The Antiquity of Man* (previously read in London), by Mr. JOHN CRAWFURD, F.R.S.—The writer remarked, in opening, that the discovery of human remains contemporaneous with those of animals long extinct in caves, and in lake pile buildings, attested the great antiquity of man, and it was equally attested by the discovery of tools, weapons, and implements, unquestionably the work of his hands, in the "drift" or loose alluvial gravel.

Sir JOHN LUBBOCK agreed most entirely and cordially with Mr. Crawford in the main conclusions to which he had come, but there were one or two minor points on which he had a rather different opinion. First, he thought Mr. Crawford somewhat underrated the quantity of human remains which had been found under circumstances which implied their great antiquity. It was quite true, no, doubt, that in the drift beds, from which so many specimens of human workmanship had been obtained, no undeniable traces of human bones had yet occurred; but it must be remembered that many traces of human skeletons had been found, and that it was only on account of the extreme difficulty in every case of feeling quite certain that they belong to those beds in which they had occurred that archaeologists and others had not felt justified in putting them forward as indubitable traces of human remains. After a reference to some human remains found on the Continent, which had given rise to much discussion, Sir John proceeded to say that when they came to researches which had been carried on in caves, there were many cases on record of caves in which human bones had been found under circumstances which implied that they belonged to the same antiquity as the weapons which were found associated with them. They found as many remains of bones in such localities as they could expect to find; and he would even venture to go further than that, and to say that they found more than they might naturally have expected to find in caves which had also been used as the dwelling-places of man. Of course, it was natural that, under any circumstances, men were not buried in caves during the time these were occupied as places of habitation; but any difficulty they might have on that head was removed when they found that the Esquimaux, who lived under such

very similar conditions, and with animals identical with those that were living with our earliest predecessors in the west of Europe, paid very little attention to the remains of their dead, allowing them to lie about neglected in the neighbourhood of their dwellings, and also that there were many races of men who were actually in the habit of burying their dead in the houses which they occupied when alive, so that the tomb was not only figuratively, but was literally "the house of the dead." Among many races, such as the Esquimaux, when a man died his body was laid in the house which he had occupied, and it was shut up, and there were traces of the same thing in other parts of the world. It was, therefore, partly to be accounted for in this way that so many traces of human bones had been got in caves which had evidently been inhabited. Upon that point he could not help thinking that Mr. Crawford would find that he need not explain or apologise in any way for any supposed absence or rarity of human remains in those caves which had latterly been examined with so much care. Then, he thought Mr. Crawford had been rather unjust to the Feejeans. When they considered the canoes these people built, the arms and implements they formed, and even the language to which Mr. Crawford had alluded somewhat uncomplimentarily, he thought they would admit that the Feejeans were more advanced than he appeared to suppose. He would say the same thing of the Esquimaux. No doubt they were very dirty, but one could not wash himself with ice; and they must remember that they lived in a country where very often it was impossible to get enough water for drinking purposes, and therefore the people could not be expected to use much of it for washing themselves. Indeed, when the circumstances were considered, the Esquimaux would be found to have made the most of their opportunities; and he even thought that, if Mr. Crawford himself, with his well-known ingenuity and his great perseverance, were to go to live in the far north among that people, he would find it difficult to carry on a more civilised state of existence than that in which the Esquimaux were found to be. Sir John further remarked that he thought Mr. Crawford had been unjust to the ancient Britons also; and next, alluding to his reference to the Egyptian hieroglyphics, he remarked that the labours of Dr. Young in that department ought to have been noticed. The principal point, however, on which he differed from the author of the paper was that he (Mr. Crawford) was a total disbeliever in the unity of the human race, whereas he (Sir John) was a firm believer in that unity. In conclusion, he remarked that it has been said that there had been certain papers which had not been read on the present occasion, because the British Association was afraid or unwilling to excite anything like hostility among the people of Dundee. Now, he thought that this paper to which they had just listened was a very good answer to any remark of that kind. He was quite sure that very few people would suppose that the British Association would pay so bad a compliment to the inhabitants of this part of our island as to suppose that they would meet with a different reception here from that which they were accustomed to meet with elsewhere in discussing such questions, or that the natives of this part of the island

would wish the Association in any way to conceal those opinions which they honestly held, and which they had never hesitated to express elsewhere. Far be it from them to shrink in any way from fair discussion. They were most anxious, one and all, to hear everything that there was to be said on the other side; and it was a very bad compliment, either to the people of Dundee or to the members of the British Association, to suppose that these interesting and important questions could be discussed in any other spirit than that in which they had been ventilated in other parts of Great Britain. He was very glad, from that point of view, that his friend Mr. Crawford had brought forward this excellent paper; and he had not the least fear that the discussion which would take place upon it would be conducted in the true spirit of scientific inquiry.

Mr. CYRIL GRAHAM called attention to the fact that the chronology followed by Mr. Crawford was that of only one person. There were several other eminent Egyptologists who followed a different system, and there was great reason to believe that the Pyramids, which the writer of the paper spoke of as having been built so very long ago, had been built within a much more modern period.

Dr. JAMES HUNT said he thought, in the first place, that the section were much indebted to Sir John Lubbock for his concluding remarks with regard to an impression that had gone abroad about the British Association being afraid to hear papers of this nature. He so cordially agreed with Sir John's sentiments on the subject, that he took this opportunity to say most distinctly that he did not think the authorities of the British Association should at all have that charge brought against them with regard to papers of a really scientific character, for they were admitted—if there was room for them they were generally read. On that point he could very well say that, as long as six years ago, he himself had an opportunity of reading a paper on that subject at the Divinity Hall at Oxford, on the occasion of the meeting of the British Association, and he could say that there had been no exception taken to any really scientific paper on account of the opinions that had been therein advanced. At the time mentioned, Mr. Crawford was, he thought, one of those who did not agree in the opinions he then expressed on the subject, and he was very glad therefore to have that opportunity of saying that he had listened to that gentleman's paper with the greatest pleasure and satisfaction, and found very little in it indeed with which to disagree. In fact he was far more in accordance with it than Sir John Lubbock seemed to be. Mr. Crawford had alluded to the connection of evidence of the antiquity of man, and all now agreed that the results of every branch of the science of man came to the same result, therefore it was that his paper was valuable, and for that reason he thought Mr. Crawford had done good service in calling attention to it. There were some little difficulties in the paper which he should like Mr. Crawford to explain. First, there was that with regard to the innate incapacity of the Australians. Mr. Crawford went on to speak of the people who were once without speech and had only instinct—and he called these men. Well, it was rather a difficulty if they were once without speech, and with only instinct,

why he called such beings men. Mr. Crawford had said that the Australians had the innate incapacity to accept civilisation, and thus argued from that absolute original distinction. Now, he did not understand, but would be very glad if Mr. Crawford would tell them how he came to call these people "men without speech and only instinct," because he was a little at a loss himself to know how such creatures, having no speech, and having only instinct—how such creatures could be called men. Next, with regard to the other subject—that of Egypt. Bunsen was an advocate for the unity of man, and he said it was utterly impossible to explain it in fewer than twenty thousand years. That was the opinion of one who was a firm advocate for the unity of man, and he boldly proclaimed that it was impossible to get reason out of unreason. Now Mr. Crawford seemed to be able to do that—to get reason out of unreason—and yet declared that the Australians were incapable of improvement. Mr. Crawford had perhaps gone out of the field—possibly some of the facts he had brought forward had not a very strict bearing on the antiquity of man—but he had much pleasure in saying—though he often differed from Mr. Crawford—that he cordially agreed with him on this occasion.

Mr. CRAWFORD was much obliged to those who had listened to his paper, and greatly obliged to the two gentlemen who had made remarks on it for the courtesy they had shown. He begged in the first place to reply to the question raised by Sir John Lubbock. Sir John was of opinion that his information on geology was not very complete; but he had to say that most of it was taken from Sir John Lubbock's own works. As to the Feejeans, he looked upon them as a race very low indeed in the scale of civilization. Some of the races in the South Sea Islands were a more civilized and ingenious race—he meant the fair-haired race—but not so the Feejeans. A commission sent out by our Government to the Feejee Islands reported expressly that 500 of the fair-haired race would, in a war against the Feejeans, be able to turn the scale of success against 20,000 of them. These people were wholly uncivilised. They killed and banished their aged fathers. In fact, he was glad he was not a Feejean himself, or he would no doubt have been banished long ago. The fair-haired race were a most ingenious people; they continued to live in a country in which no other human beings could subsist, for when the red American Indian endeavoured to live in their country it was found that he could not exist among them. As to the unity of the human race, of course he did not believe in that. His friend believed in the theory of special selection, and he hoped to be able to hear Sir John describe his theory of the human species, to explain how he discovered the missing link, how a monkey became a man, and how all the different races of men had undergone the change they had now done. He would like to see a single particle of evidence to show that a black man became white, or a white man became black, or how a black woman could be compared to the women he saw before him. Mr. Graham stated that he had not agreed with certain Egyptologists. Now, he found that Egyptologists had not agreed among themselves, and he had taken the best authority he could, and he was satisfied that the chronology of Egypt was of



great antiquity. He did not quite understand what his friend Dr. Hunt had said about speech. He had made remarks upon the difference between speech and instinct——

Dr. HUNT—You stated that there were men without speech, and with only instinct, and I asked how you could class these creatures as men?

Mr. CRAWFURD replied that he had not stated any such thing, and Dr. Hunt had only misconceived what he did say. He said that there was capacity for speech, but they could not speak, because they had never learned. In the same they could not use gunpowder or steam engines, because they knew nothing about them.

Sir SAMUEL BAKER observed that he was very glad to see anthropologists and ethnologists on such good terms with one another. They reminded him of a distinction which an Arab chief once made. An anthropologist and an ethnologist were apparently one,—just the same,—with a little difference.

*Skin, Hair, and Eyes as Tests of the Races of Men (previously read in London), by Mr. JOHN CRAWFURD.*—He remarked that the skin, hair, and eyes, taken either separately or conjointly, formed but a very ambiguous test of the races of men, seeing that some of them are common to several races in all other respects widely different. The complexion or colour of the skin, so far as the integuments were concerned, was the most conspicuous distinction of race. It was white, of many shades in Europe, including the neighbouring portion of Western Asia. There was no evidence that a black or brown native race ever existed in Europe, or a native white race in any other part of the world. The eye, in a great measure, followed as to colour and complexion. With respect to position, the eye was more or less deep seated, or had more or less prominent properties, which did not appear to be characteristic of any particular races. In the European races, and those of Western and Central Asia, it was horizontal, while with the Chinese and races of Tartary it lay obliquely in its socket, the inner angle being depressed, while the outer was elevated. This character, however, belonged more or less to other races equally with the Chinese, so that it was not of much value in the discrimination of races. Some had fancied that colour in men depended on climate, or that a powerful sun made the complexion more or less black, while a weaker one left it to improve in fairness in proportion to its feebleness. This popular error arose out of the narrow experience of our ancestors. The author then went on to state that on the continent of Australia the native inhabitants are of the same unvarying black from Cape York in the 11th degree of latitude to Tasmania in about the 43rd degree. They had here, then, an exclusively black complexion, while in other parts of the world, with corresponding climates, they had fair, brown, yellow, and black complexions. Such incontestable facts as these disposed at once of the hypothesis of climate being the cause of colour in the human complexion. If, then, the variety of colour were not the effect of climate, from what cause was it derived? This was one of the inscrutable mysteries which they could not solve any more than the varieties of colour in the lower animals. In con-



clusion, he remarked that Nature had made colour a distinction of species in the lower animals, and it had done the same, although not less definitely, in the races of men, and in both cases men were equally ignorant of the grounds on which it has done so.

Mr. CRAWFURD then said he would be glad to hear any remarks on this paper, and first he would ask for the opinions of the founder of the Anthropological Society.

Dr. JAMES HUNT was most happy to accept the invitation to make a few remarks on this interesting paper on one of the greatest difficulties in the whole range of the science of man. Mr. Crawford had wound up his paper by saying that as yet science was unable to account for the distinction of colour. Well, they had been at that for the last half century; attempts had been made to correlate the different races or species of men with the particular physical condition by which they were surrounded. Still, up to the present there was very little advance or sound generalisations arrived at. Dr. Prichard had said that climate would account for it, and endeavoured to illustrate this, but before he concluded his labours had to acknowledge that we could not tell how the distinctions in mankind had been produced, and to content himself in putting forth speculations on how they might have arisen. There were not such differences between bare skulls that they could not be used as a basis of classification; and he held that of the colour of skin, eyes, and hair, the structure of the latter was the most important for this purpose. Mr. Crawford held that there were exceptions, and he pointed out these; and though he did not know that gentleman's present opinion with regard to the number of special creations of man, which he required to explain the present differences in mankind, he knew that four years ago Mr. Crawford believed forty to be necessary.

Mr. CRAWFURD: I have sixty now.

Dr. HUNT: I have not been in communication with Mr. Crawford much of late, but the addition of twenty new species in four years is, on the whole, a satisfactory rate of progress. I think this subject is one of the most important in the whole range of anthropology—I beg your pardon,—the science of man. Dr. Hunt then continued to explain that, of late years, attempts had been going on to make examinations in different counties and countries and prepare tables of the results, so that a general broad classification might be arrived at. The subject would be a matter of difficulty for many years. He had found as great difference amongst the colours of hair in Norway as there was in this country, and he hoped that by the investigations now going on they would be able to correlate the structure of most of the races of Europe. Mr. Crawford had admitted, as all must, that science was not yet in a state to show the cause of physical, mental, and moral differences in mankind; and he had said, too, that they could give no reason for such differences. In the latter he was, perhaps, going rather too far, as he (Dr. Hunt) held that man's progress in the scale of civilisation, accompanied with other things, bore a relation to both skin and hair. A dark skin, accompanied with crisp hair, was invariably a mark of mental inferiority; but he held that none of the characters on which

Mr. CRAWFURD dwelt could be relied on alone as a basis of classification. They only become valuable when combined with other characters.

Mr. CRAWFURD said there seemed to be no very material difference between the President of the Ethnological Society and the President or Director of the Anthropological Society, and he was sure they would be all very glad that such was the case. With respect to colour, Dr. HUNT assigned inferiority to dark skin. He (Mr. Crawford) would deny that. Napoleon had dark hair, and a dark skin too; and he did not conceive that a better specimen, so far as the mere humanity was concerned, had ever been produced. Of course, he meant the first Napoleon. The third Napoleon was not a very genuine Italian or Corsican; there was something Teutonic about him, too, he was told. Now, with respect to the inferiority of the black people, although the Hindoos were black they were incomparably superior and in a far more advanced state of civilisation than the brown-complexioned Malays. He would advise the Dr. to give up the black inferiority altogether, for he had nothing whatever to stand upon. With respect to the races being distinguished by hair or complexion, differences were to be found in the same family in the prosperous town of Dundee, by the same father and the same mother. Suppose a family of seven daughters. There might be cases of the kind, and he hoped there were. One had dark hair and a dark complexion; another was fair-haired; and a third was reddish, or, to be more genteel, auburn. There was not the slightest superiority in the dark-haired and dark-complexioned daughter as compared with the lighter-haired and clear-skinned members of the family. There were cases of every sort of hair and every sort of complexion being found in families by the same father and the same mother. How could they make out that?

Dr. HUNT said perhaps Mr. Crawford would point out where a race was to be found of equal intellectual power to the fairer races when dark colour was combined with crisp hair?

Mr. CRAWFURD replied that he knew of the dark colour being combined with wool, and he had known some very pretty people have curly hair. Dr. HUNT said he would not condemn every one. That was very well put on his part, for in Dundee they could find beauty and talent in every department of colour.

Dr. HUNT, in reference to Mr. Crawford's remark in respect to wool, explained that he did not make use of the word wool, because wool was not hair.

Mr. CRAWFURD remarked that hair was not wool, and wool was not hair, but they were pretty nearly the same thing. There could be no distinction drawn between wool and hair, except what was obvious to the eye. They could make the same use of the one as of the other, though he would be sorry to see wool upon a pretty young lady.

Dr. HUNT replied that a dark colour of hair and eyes, combined with curly hair, was always a mark of mental inferiority, and he challenged Mr. Crawford or any one else to bring forward an exception to this generalisation.

The discussion then terminated.

*The Supposed Aborigines of India, as distinguished from its Civilized Inhabitants*, by Mr. CRAWFURD. (Previously read in London.)—In many parts of India there existed rude and even savage tribes, differing widely in manners, customs, religion, and not unfrequently even in language, from the great body of the civilised inhabitants. People in that state of society were found only in hilly or mountainous districts, more or less inaccessible to conquest, and by their comparative sterility holding out little temptation to conquest and occupation. They were never seen in the fertile and well-watered alluvial valleys of the great rivers, which, on the contrary, were inhabited by civilised nations, however differing among themselves in manners and language. Linguists and craniologists had invented a theory to account for this state of things, which supposed the rude mountaineers to be the sole aborigines of India, while it imagined the civilised inhabitants to be intrusive strangers, who in a remote antiquity invaded India, conquered it, and settled in it under the imposed names of Aryans for Northern, and Turanians for Southern India. This view appeared to him utterly groundless, and he went into a lengthy description of the history of the people, their manners and mode of life, and quoted several accounts of the several tribes, in order to refute the view which he had mentioned. After an elaborate paper he concluded:—The mind may safely carry us back to a time in which the social state of India was similar to that of America, when the civilised tribes were few in number, and the wild or savage formed the majority. The Hindu is, beyond all question, a far more highly endowed race of man than the Red man of America; and civilisation would probably spring up earlier, at more points, and attain a higher maturity in India than it did in America. We may even point at the localities in which civilisation is most likely to have had its earliest seats. Separate and independent civilisations would probably spring up in the plains watered by the "Five Rivers," in the upper valleys of the Jumna and Ganges, in the central and in the lower valley of the Ganges, and in the valleys of the rivers of Southern India, such as that of the Nerbudda, the Godavery, the Kistna, the Cavery, and the Taptee. These nascent civilisations would be independent of each other, and for a longtime be as unknown to each other as were the Mexican and Peruvian. All this most probably happened long before there was an Aryan invasion, or a religion of Bramah. The state of India at such a time would be a parallel to that of America on its discovery; the wild and savage tribes would be numerous, and the civilised few in number. Proportionate to its extent, it would have as many small tribes, speaking as many distinct languages as America itself. India has still a score of nations, with written languages, but the number of its wild tribes has not yet been counted.

General COTTON remarked that each of the races referred to was deserving a separate study. Some of them were so like each other that the inexperienced would naturally suppose them to be one of the same tribe, but so great was the distinction that the one was in actual terror of the other.

*The Origines of the Norsemen.*—Mr. H. H. HOWORTH, F.A.S.L., F.E.S., read a paper on "The Origines of the Norsemen." He said that in a paper which he read before, he endeavoured to show how differently the ancient features of Scandinavia must be viewed in order that its influence in the distribution of the ancient inhabitants of Europe might be appreciated. He then proceeded to examine and analyse in detail some of the problems with which it was connected. The reasons for the sudden energy of the Norsemen in the eighth and ninth centuries were to be found in the commotions that were taking place at those dates. The Mahometans were then in the full swing of their conquering spirit. The Georgian and Armenian annals were full of accounts of their sweeping in among the mountains of the Caucasus, and of the new life which their arrival aroused there. The inexplicable intricacies of the Eddic faith may perhaps receive some light from an examination of the effects of a Mahomedan infusion into the strange religion of the Parthians. Not that of Zoroaster—the religion of its higher society—but what we find reflected on its engraved gems and sculptured stones. It was this alone which could explain the very extraordinary fact that wherever Scandinavian relics were found in Ireland, Orkney, Denmark, or Sweden,—there were also found heaps of the coins of the Caliphate—not many from Byzantium, few from the Latin kingdoms of the west, but absolutely thousands from the other sources. Some might be seen by those curious in such matters in Edinburgh, which were discovered along with some silver remains.

*The Character of the Negro.*—Mr. C. W. DEVIS read portions of a paper, prepared by Dr. JOHN DAVY, "On the Character of the Negro chiefly in relation to Industrial Habits":—

In this paper the chief object of its author was the vindication of the negro, who, he believes, has been unjustly considered a sluggard and inveterately idle. The argument used is of two kinds—one is founded on the organisation of the African, insufficiently fitted for work—indeed the very cause, under a mistaken humanity, of his first importation into the West Indies, with the vain hope of preserving the feeble and cruelly worked natives; the other resting on experience—a very extensive experience—finding that, with equal motives to be industrious, the negro is not inferior to the white man in industry. The author adduces instances of conduct on the part of negro labourers that would be highly creditable to Europeans in the same condition of life. He concludes with the expression of belief that such peculiarities as belong to the negro—as colour of skin, quality of hair, &c.—are of a kind suitable to him in his native climate, and beneficial under a tropical sun and in a malarious atmosphere, and not of a nature to allow of his being considered either as a distinct or inferior variety of the great human family; and further, that he is as capable as the white man, under continued education, in favourable circumstances, and freed from the curse of slavery, of becoming civilised, and of making progress in the liberal arts and sciences. One fact is dwelt on as of a very promising kind—viz., that these tribes, in the far interior mountainous regions of Africa, where slavery has least prevailed, and where the climate and soil are good, are most advanced—probably as

much so in civilisation and the useful arts—such as the working of iron, &c., as were the ancient Britons about the time of the first Roman invasion.

Mr. CRAWFURD remarked, that with reference to the Barbadoes, the condition of the negro was very peculiar. They contained a dense population, and if the negro did not work he must perish, and if the whole of the West India Islands, Jamaica included, were like them, the negroes would be peaceable and laborious. He was sure they would be glad to have this opportunity of returning thanks to Dr. Davy for his admirable paper, the whole of which he was sorry had not been read.

Dr. HUNT thought it was somewhat unfortunate that when an important paper was brought before the section they had not time to hear it read, and he considered Dr. Davy had a just cause of complaint against the manner in which his paper had been curtailed. So far as he had been able to gather from the portions of the paper which had been read, he was fully persuaded that it was one of the most important that could be presented to any scientific body. It was one of those questions which were now being tested in the Southern States of America. Of course, there was only one desire among scientific men—to know the truth. In the Southern States of America the disposition of the negro for labour was being tried. It had been contended by Dr. Nott, a distinguished anthropologist of that country, that from his study for twenty years of the negro character, there was a natural disinclination to field or agricultural labour. Whether that was so or not, he should have been very glad to hear Dr. Davy's paper read, as he had no doubt it would have thrown some light upon the subject. He had heard the other day from a gentleman who had just come from the Southern States of America—a medical man—that the frightful amount of destitution now existing in that country was something that no one could picture. The amount of disease, the amount of destitution was something very great indeed. Up to this time the blacks had not taken to labour. At present it appeared that the negro as now existing in the Southern States of America, was incapable of understanding and practising the present European code of morals—which made a distinction between the *meum* and *tuum*. He had asked this gentleman why they were not prosecuted, and he replied that if they attempted to do so they would have to build jails for three millions of people. These were very important facts, inasmuch as they were opposed to Dr. Davy's experiences. The question was, what was really the actual state of the case? In regard to Dr. Davy's remarks that some persons contended that the negro was little above the brute, he had to say that amongst his acquaintances there were not many holding that view. What he said was, that intellectually and morally he was inferior. In reference to the theory respecting field labour, there was a small section who believed this, and he had never understood why such should be the case. Why should there be this natural disinclination to work in the negro character? So far as the muscular system was developed, so far as regarded strength of body, so far as respected the power of resisting the heat of the sun—looking

at all their physical conditions—the negro appeared to be a species which was perhaps best adapted for labour, and why he should not be able or willing to work was a mystery. He hoped and trusted with Dr. Davy that the time would come when it would be found possible to discover what had hitherto been the objection of the negro to continuous labour. He did not think, when they called the negro inferior, that it was, as Dr. Davy said, a stigma. On the contrary, he held it was nothing of the sort. It was not a stigma upon the negro race to say that that race was mentally and morally inferior. It was not a stigma to any man to say that he was intellectually inferior to some other person. It was either a true or erroneous opinion that the negro was inferior. He was surprised to hear Dr. Davy speak of the innate goodness of the negro character, or even of the innate character of the Dundonians. Whatever might be his opinion of the negroes, he would not go so far as to say that they possessed innate goodness. Dr. Davy said it was the opinion of many persons. He differed with these other persons as he differed with Dr. Davy, for he did not think there was that innate goodness either in the negro or the Tasmanian—although the latter for a different reason, as they had now all died out.

Mr. WILLIAM BREWIN, Cirencester, said that he went out to Jamaica as one of a deputation from the Society of Friends. After arriving in the island, they travelled through the whole of it, and visited twenty-one out of the twenty-three parishes. They had intercourse with magistrates, planters, and people throughout the whole island. With respect to the black man, he wished his audience clearly to understand that it was the same with him as it was with most men; for he could speak of the brown man in the east, and he had seen a little of the red man in North America, and he could assure them that a black man was as willing to work, if he was paid for it, as any coloured man on the face of the earth. They would remember that thirty years ago the British nation paid twenty millions for emancipation. If that had gone to the right development of a colonial system in that island, we should have had a far better state of things than we have. Jamaica is what is called an unfortunate island. It has been going down for the past half century, and he said the great reason of this was that properties in Jamaica were not managed by the proprietors. They were worked by a system of attorneys and agencies, which was not only a very expensive, but also a very unsuccessful system. For everybody knew that an estate was best conducted by those who had the greatest interest in it. He believed the attorneys did their best, but they worked the estates in a very unsatisfactory system; perhaps paying ten to twenty-five per cent. for the capital employed. How was it possible for such estates to be successful? He said that if he were to turn planter to-morrow he could get as many labourers as he wished to employ, for the simple reason that he would pay them for their work. But what took place after the emancipation? The planters generally, instead of doing their best to induce the black people to labour on their estate, by paying them a fair day's labour, valued their labour at one-third of the price when they were slaves. When in a state of bondage, their masters lent them out at half-a-crown a day;



but now that they were free, they only received eightpence for their day's labour. The negroes would not submit to this, and the consequence was that their houses were pulled down, and they had to fly for their lives. The white men then introduced the system of importing labourers, or coolies, as they were called, from the other side of the world. In this way they raised a debt in Jamaica of something towards half-a-million by this immigration scheme, and the total debt of the island was £900,000, and he believed that one-half of this was caused by this immigration scheme of bringing labourers from the other side of the world into Jamaica.

Mr. C. W. DEVIS remarked that it appeared to him that Dr. Davy had mistaken the negro for some one else. It was the infusion of white blood that made the negro capable of doing what he could. Dr. Davy had said the negro was subject to the same diseases as themselves; and had quoted that splendid passage of the poet by way of helping him out of his difficulty. But what was the fact? why, that the negro was subject to entirely different diseases from Europeans. There were, it is true, some diseases they had in common. He might instance the yellow fever as a disease to which Europeans were subject and negroes exempt. Any one of those who had the slightest infusion of white blood in his veins was subject to it, and it might be said that the fever acted upon his constitution almost in proportion to the quantity of white blood in his veins. There was no better ascertained fact than that the negro character was sluggish. If he were taken into another climate, he would work spasmodically, but although he might not retrograde, he would certainly not progress.

Mr. KINLOCH, of Kinloch, wished to say before they proceeded further that the discussion had turned in a manner he did not expect. They had heard a great deal of the possibility of teaching the negro habits of industry, but he had come there to learn where they had shown the capacity of advancing step by step along with the white races in civilisation. They had not heard a single instance. Dr. Davy had not told them of a single instance. Dr. Davy had told them that there were men of intellect among the negroes; that there were men capable of being instructed and advanced in science; but he had not instanced a single case of a pure-blooded negro having made any discovery or done anything in the way of advancing civilisation and science. He humbly thought it would be much more satisfactory if, in speaking of the negro race, they would show the capacity that existed in their nature of improving and advancing in civilisation in the world along with the white race. He was sorry to say he had not heard one word about that. He did not dispute that the negro would work if paid well. The first observation that was made by Dr. Davy was that the cries of the infants of both black and white were the same. This, in his opinion, was absurd in the extreme. There were many animals which had the same cry. Indeed, he did not think the observation was at all in point. What they wanted was evidence, if it did exist in the negro, that he was capable of making discoveries in science, in knowledge, like Sir Humphrey Davy, their friend Murchison, and others, doing good to civilisation, and advancing the cause of knowledge.



Dr. DAVY was ready to show this. He read the following extract from his paper :—Professor Tiedeman, I need hardly remind you, has given many instances of negroes who had made a certain progress in the liberal arts and sciences, and distinguished themselves as clergymen, philosophers, mathematicians, philologists, historians, advocates, medical men, poets, and musicians, and that many also have earned reputation by their talents in military tactics and politics.

Dr. HUNT said Abbé Gregoire had published a work, in which he gave the history of fifteen negro philosophers. When it came to be investigated, every one of these fifteen were found to have white blood in their veins.

Dr. O'CALLAGHAN stated the experience of a gentleman who had a large knowledge of the negro, and who gave it as his opinion that the negro was not incapable of farther intellectual development after he attained adult education, but had told him that in the regiments into which they enlisted they were taught to read and write, and even to correct the accounts of the paymaster.

Mr. CRAWFURD said they had known the negro for four hundred years, but they were not aware that he had made any material progress during that time, while other European and Asiatic races had progressed. This was rather against the negro. With regard to the increase of population, the results were not nearly in proportion to those of white races. He concluded by stating that there was no doubt a great deal of distress and destitution in the States, and he thought when the negroes were emancipated an equivalent should have been given to their masters. He was sure the Section would willingly give their thanks to Dr. Davy for his able paper.

We have already given Sir John Lubbock's paper and the discussion thereon in another place. In all these cases we have closely followed the reports in the *Dundee Advertiser*. We have thought it better to do this than to request the authors to make their own emendations.

Mr. CRAWFURD read to the Section a lecture on the "Races of Man," which we believe was originally delivered before the Sunday Evenings for the People, held last year in St. Martin's Hall. On this general hash up of nearly every conceivable subject, Mr. H. VIVIAN of Torquay delivered a very fluent discourse on what may be styled the "Interpretation of the First Chapter of Genesis;" and Mr. A. R. WALLACE again favoured the public with an interesting speech in favour of Darwinism. Mr. Wallace, however, confined his arguments chiefly to his favourite illustration, pigeons, and has not given us any new fact or put any old fact in a new light. The speech of Mr. Crawford on this paper we deem rather too comic even for our pages.

# PROCEEDINGS OF THE PARIS ANTHROPOLOGICAL SOCIETY.\*

THE Paris Anthropological Society held on the 8th of June an extraordinary meeting, which was followed by a banquet, in the Salon de Lemardelay, when a pleasing incident occurred. At the dessert the Secretary received the following telegraphic message:—

“Francfort-sur-le-Mein, June 8, 1865.

“*Salut à la Société d'Anthropologie de Paris. Les fondateurs réunis des Archives Allemandes d'Anthropologie.*

“De Baer, Desor, Ecker, His, Lindenschmit, Lucae, Rüttimeyer, Schaaffhausen, Vogt, Welcker, Vieweg.

The news of the foundation of a new periodical devoted to Anthropology was received with great applause. An immediate reply by telegraph was sent to the following effect:—

“*Les anthropologistes français, à table, aux anthropologistes allemands, merci, salut et fraternité.*”

Report on the prize Ernest Godard, of the value of 500 francs, awarded to Dr. Gillebert d'Her court, of Monaco, read by M. Simonot.

Our colleague Ernest Godard, (commenced M. Simonot) died on September 21, 1862, at Jaffa, exhausted by the fatigues of a long and toilsome voyage which he had undertaken in the interest of science. On his death-bed he did not forget the Anthropological Society, of which he was one of the founders.

“I bequeath,” he says in his will, “to the Anthropological Society the sum of 5,000 francs, the interest of which is to constitute a prize, to be awarded every second year to the author of the best memoir on any subject relating to anthropology.”

This is the first time that an opportunity is afforded to us to act in conformity to his bequest. Six Memoirs have been sent in competing for the *Prix Godard*, bearing the following titles:—

No. 1. On the importance of the black race, and its part in humanity.

No. 2. A printed Memoir by Dr. Joulin, entitled, *Anatomie et physiologie comparée du bassin; etc.*, extracted from the Archives Générales de Médecine.

No. 3. A printed Memoir by M. E. Koeberlé, entitled, *Essai sur le Crétinisme.*

No. 4. A manuscript Memoir by M. Gillebert d'Her court, entitled,

\* Continued from vol. v, p. 364.

*Mensurations opérés sur 76 indigènes de l'Afrique française et sur 2 Chinois.*

No. 5. A printed Memoir by Dr. Morel, entitled, *De la formation du type dans les variétés dégénérées, ou nouveaux éléments d'Anthropologie morbide pour faire suite à la théorie des dégénérescences dans l'espèce humaine.*

No. 6. A manuscript Memoir, written in English, entitled, *Comparative Psychology*, sent by Mr. Charles Wake.

M. Simonot then proceeded to read an analysis of each essay sent in for competition, commencing with the essay on Cretinism, by M. Koeberle.

According to M. Koeberle, the primary cause of Cretinism is a diffusible agent, the existence of which coincides with the geological formations of certain localities and the mineral constituents of the water, and is in some respects analogous to the miasmata producing intermittent and typhoid fevers. Dr. Morel, in his treatise on degenerations, has already said that Cretinism is caused by the special action of a poisonous principle on the cerebro-spinal system, which miasma is somehow connected with the soil where magnesian limestone abounds, though it cannot absolutely be affirmed that Cretinism may not be met with in other geological formations. M. Koeberle looks upon goitre and Cretinism as two distinct morbid conditions, since, in a great number of localities, goitre is, and has been for a long time, prevalent, without the co-existence of Cretinism, which, in his opinion, is developed by the influence of an air vitiated by a miasma *sui generis*, whilst the excessive use of certain waters gives rise to goitre. Cretinism seems at present to be unknown in North America, Australia, Africa, Oceania, where, nevertheless, goitre has been observed. M. Koeberle is, therefore, of opinion that Cretinism is not an affection special to any race.

*On the formation of type in degenerated varieties*, by M. Morel.—This essay is merely a sequel to Dr. Morel's work on physical, intellectual, and moral degeneration; being, so to speak, a personification of the ideas expressed in his larger treatise. Given a morbid principle inherent in the constitution of the progenitors, this principle, if nothing opposes its transmission, becomes in the descendants the commencement of a series of successive pathological phenomena, inducing the progressive decay of a family, or may be of a whole race. The degenerated being is thus a morbid individuality in which are accumulated all the elements which have altered the constitution of a series of ancestors, by disturbing the evolution of their faculties and vitiated their instincts. But apart from the general characters belonging to all degenerated individuals of the same species, there exist separate characters belonging to individuals of different varieties.

Such being M. Morel's starting point, his object is to establish, from the physiognomy, the external and internal forms of the degenerated, the nature of these particular characters, to trace the morbid hereditariness to which they must be attributed, in short, to study the hereditary transmissions which have produced the formation of a type in degenerated varieties and their laws. For the better illustration of his principles, M. Morel added to his treatise three plates representing three sisters, the daughters of parents of a neuropathic condition, and a fourth plate representing two sisters, the daughters of parents given to alcoholic excesses and etiolated by want of proper nourishment.

*On the importance of the black race, and its rôle in humanity.*—The author, says M. Simonot, puts aside the interminable question of the origin of the human races, but, taking the Negro as he finds him, maintains that the black race is as indispensable to the general harmony as the white race. Of all the differences subsisting between the races of men, that of the colour of the skin appeared to him the most important, so that he would feel disposed to adopt it as the base of a classification, without, however, excluding the other characters, such as prognathism, woolly hair, etc. This dichotomy of the human species in two fundamental types—the pure white and the pure black, the other colours being only intermediate gradations—appeared to him the more acceptable, inasmuch as these two types inhabit perfectly distinct regions of the globe. He considers that a race which can only live in certain regions, to the exclusion of other races, is for these regions the superior race, owing this superiority precisely to the conditions which elsewhere would cause its inferiority. Where a race can only maintain itself by excessive precautions, they have only a factitious existence, resembling hot-house plants. This is demonstrated by the success attending colonisations of the whites in temperate zones, and their failure in inter-tropical regions. In the Havanas, Martinique, Vera-Cruz, Bahia, etc., the white race can only maintain itself on condition of following sedentary, commercial, or industrial pursuits, and still they require reinforcements from the mother countries. As to the cultivation of the soil, it has always been the appanage of the Negro, whether native or imported, an aptitude which is not attained either by the red or yellow populations, which this author considers as derived from the white type. Now, as the abolition of the slave trade precludes the white man from exacting forced labour from the Negro race, the best means to be adopted are to civilise the Negro, and to make him participate in its benefits. This treatise, observed M. Simonot, is written in a very elegant and lucid style, and denotes in the author firm convictions and generous aspirations. No doubt some of the theories contained in this memoir may appear very questionable,

such, for instance, as the predilection of the author for the colourisation of the skin as a basis for classification, or his idea of the derivation of the red and yellow races from the white type, or, finally, his idea that the cross-breeds of the Negro and the white are the predestined inhabitants of localities intermediate between hot and temperate regions. To discuss them would have led too far; he, therefore, confined himself to merely indicating these questions.

*Comparative Psychology.* By M. C. S. Wake.—In this treatise, the author endeavours to demonstrate, what no one contests, that in the series of animals their superiority results from more perfect development of the nervous system. The author gives a minute analysis of the intellectual acts of man compared with those of animals, in order to establish the superiority of man. We are unable, concluded M. Simonot, to give an analysis of this psychological dissertation without entering into details. But whatever may be the interest attached to works of this nature, they do not appear to us to give a great impulse to the study of anthropology.

*Measurements and observations made on seventy-six natives of French Africa.* By M. Gillebert d'Hercourt.—It is not without embarrassment, said M. Simonot, that we approach the examination of this memoir. It is not our task to follow the author in his developments and to appreciate the logic of his deductions. We have before us a collection of figures, imposing in their number, the enumeration of which must fatigue your attention without much enlightening you as to their value.

For each of these groups the author has prepared a table, indicating for each individual, age, sex, colour of the skin of the covered and uncovered parts of the body, the diameter and curves of the head, forming for each individual a total of thirty-three measurements. . . . The author also offers some observations on the colouration of the hair, eyes, and skin, of the structure of the feet and hands, and the resisting power to cold possessed by the Arabs and Kabyles. The hair of the Arabs is generally black, sometimes nut-brown or auburn. That of the Negroes is a jet black, and presents the peculiarity that it only becomes crisp when it has reached a certain length. Large and horizontally slit, the eyes of the Arabs are more or less dark brown, exceptionally there are seen green eyes. The eyes of the Kabyles are of a much lighter colour; when grey they coincide with a notable whiteness of the skin, red hair and freckles. In the Negroes, the eyes are frequently so dark that it becomes impossible to distinguish the pupil of the iris.

The Arabs of Algeria are distinguished into Town-Arabs or Moors, and Tribe-Arabs. In the former, the skin is of a lighter colour, in the latter it is bronzed, or nearly black. This is partly the effect of

differences in habitation and dress existing between the Moors and the Tribe-Arabs. As regards the extremities, the hand is characterised by want of suppleness and restricted extension, the effect, no doubt, of field labour, which chiefly engages the prehensive muscles. The feet are rather flat, and considerably widened at the anterior part. The Arab, in walking, turns his great toe outward. Among the Moors the toes are more or less close to each other, and curve downwards, so that in some mountaineers they assume the form of claws. Either the habit of walking barefoot, or the shape of Algerian foot-gear, may account for this.

It has caused some surprise that Algerian troops support so well the rigours of a Parisian winter. The fact is that in the hilly districts of Algeria dry frost alternates with snow-storms, whilst in the valleys abundant rains give rise to a very disagreeable cold temperature. The variations in temperature in some parts are very great, which the Arab supports better than the European. Thus, his epidermic resistance acquires an energy, which we rarely find among our citizens. The memoir also contains a table representing various modes of tattooing. From some of the forms, the crucial, for instance, on the forehead, the Christian origin of the Kabyles has been inferred. But, in the first place, it is not always seen in the Kabyles, whilst it is met with among the Arabs of the south, who are Mussulmans. . . . M. Simonot concluded in the following terms:—Whilst fully recognising the merits of the pathological studies of MM. Morel and Koeberle, and appreciating the value of the researches of M. Goulin, M. Wake, and the author of the anonymous treatise, we felt justified in awarding the "Prix Godard" to M. Gillebert d'Hericourt, whose eminently practical essay is in complete accord with the anthropological instructions which the society has adopted as the programme of its studies.

M. Gillebert d'Hericourt, in thanking the Society for having awarded to him the "Prix Godard," expressed a wish to receive it in the shape of a gold medal.

M. Bonté observed that such a precedent might be very embarrassing to some future laureates who might prefer hard cash.

M. Sanson could understand that a laureate might prefer a medal, but, as he also shares M. Bonté's doubts, he would propose a silver-gilt or bronze medal, and the surplus in money, a mode now frequently adopted.

Consulted by the President, the Society agreed to deliver to M. d'Hericourt his prize in the shape of a gold medal, unless he preferred the combination proposed by M. Sanson.

M. Henri Martin addressed a note to the Society relative to some observations attributed to him by M. Lagneau in his summary on anthropology in France.

DR. DAVID PAGE ON MAN, IN HIS NATURAL HISTORY  
RELATIONS.\*

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For a long time the public have asked for an elementary work on that great science which is now engrossing the attention of all thinking men and women—the science of Anthropology. The preparation of such a work was no easy task. It required for its composition an adept not only in scientific arrangement, but one, who had great literary power combined with the true spirit of scientific inquiry. At last such a book, we do not hesitate to affirm, has been offered to the world, and we believe that it will be accepted by the public with both gratitude and admiration.

Dr. DAVID PAGE, after devoting his life to the study and popular exposition of geological science, has now commenced to do for anthropology what he had formerly done for another great department of inductive science. Dr. Page's text books on geology have done as much to advance the popular study of geology as that of the writings of any living man. It is therefore with no ordinary feelings of satisfaction, that anthropologists see such a man coming boldly forward to swell an important department in their ranks.

The speech which Dr. Page recently delivered at the Dundee Anthropological Conference, at once pointed him out to be one of the future hopes of anthropological science. The publication of the book before us, will show a larger audience, that he is a fit man to become the popular exponent of the science. Dr. Page, in this book, has addressed a Scotch audience ; and hence it is, that his book is especially suited to a large class of English students. No doubt the author well understood the wants of the audience whom he addressed, and knew what sort of fare would best suit them.

The nourishment set before his readers does not certainly consist in very strong meat. It is, on the whole, a judicious mixture of meat and milk, and well suited, we do not doubt, to the requirements of the age for a section of both the English and Scotch public. We are, however, disposed to think that its influence will be much more felt North of the Tweed, than in England. In the latter country it is, however, very well adapted to elementary study. It will excite

\* *Man : where, whence, and whither ; being a Glance at Man in his Natural History Relations.* By David Page, LL.D., F.R.S.E., F.G.S. Edinburgh : Edmonston and Douglas, 1867.



the attention, without either satisfying or nauseating. There is no pretension whatever about the book. It is wholly free from all the jargon of scientific nomenclature, and is, at the same time, rigidly scientific in both its general treatment and in its scientific details. The elements of this work formed the subject of two lectures delivered before the Edinburgh Philosophical Institution in November, 1866; and the author has now expanded these lectures into a little volume of some two hundred small pages. In the preface he informs us, that "by many the views advanced were adopted without reserve; by some, though not adopted, they were received in a spirit of candour and inquiry; while by a few the whole argument was met by the most vehement and unreasoning opposition." He then goes on to tell us that the present volume is written as a vindication of the "misrepresentations," to which, "either ignorantly or intentionally," his lectures were subject.

We have no intention of anticipating the contents of this book: but do not hesitate to say, that it is one which any anthropologist may, with safety and good effect, put in the hands either of his own children, or of that large and daily increasing class who come to him for advice and for instruction.

The plan of the work is briefly as follows. After a very well written introductory chapter, the author treats of the question of man's zoological, geographical, ethnological, and functional relations. The next section treats of man's historical, geological, genetic, and progressive relations. A short conclusion and summary complete the work. Nothing could be more rigidly simple than the plan here given.

We think the title of the book to be most unfortunate, and consider it would have been much better as placed at the head of this article. We also especially object to the heading of the chapter, "Man, his Ethnological Relations." To tell us that ethnology means the "science of races," is to invent something in nature which really has no existence, in order to keep up the use of a word that is now generally discarded in scientific literature, especially since Professor Huxley defined it to be the "science of man fancying," and thus only fit for the pages of *Bell's Life* or some other paper devoted to the noble science of self-defence. Dr. Page, too, like most other modern writers, tells us that the ethnologist restricts himself to the study of "existing races," and adds, "can throw no light on the origin, antiquity, or destiny of man." He uses the two words, ethnology and ethnography, as synonymous—a sufficient evidence that one of them is at least unnecessary. At p. 76 he says, "ethnology or ethnography, though the science at present most in favour, must after all be regarded as a

mere department of anthropology." On this point there is now fortunately little difference of opinion, but we trust that in the next edition of this work we shall only have the word *ethnography* used to signify the study of existing races or species. We submit, however, that it would have been better and more correctly scientific to have headed this chapter *Man, his Specific Relations*, or even *Man, his Racial conditions*, than to have again introduced a definition of *ethnology* which has long ago been abandoned by ethnologists themselves. If a writer like Dr. Latham protests that there are no such things in nature as the "races" of man, it is surely a little hardy of Dr. Page to attempt to give a definition to that which has no existence? *Ethnology*, when employed now, is generally used in the same sense as historical anthropology, which includes historical and comparative philology, mythology, &c., while *ethnography* is now by pretty general consent confined to mere descriptions of existing species or varieties of mankind—or in other words, descriptive anthropology.

A few short extracts from each of the sections of this little book will assist to reveal to the reader an indication of the author's treatment.

In the introduction, p. 16, we read as follows:—

"Physiologically, too, great advances have recently been made in the determination of organic functions; and psychologically, writers are beginning to hazard something like a scientific opinion as to the relations that subsist between physical organisation and mental manifestations. But with regard to man's relations to the great scheme of life—his where, whence and whither in the cosmical plan of continuity and progress—few have made them the subject of earnest study, and still fewer have ventured to give expression to their convictions. It is only of recent years that the study of man has been recognised as an independent branch of natural science, under the title of anthropology, and the only British institution for its furtherance, the Anthropological Society of London, is but a thing of yesterday. If not ignored on certain questions, the investigation has at least been discouraged; and when not ignored, it has been too much held in abeyance to popular prejudice and preconceptions. Such weakness, however, is far beneath the dignity of science; such restraints on free and rational inquiry can never be conducive to the interests of religion. Man, in all his relations, is intimately connected with external nature; and these relations, as bearing on his physical, intellectual, and moral welfare, become not only legitimate, but imperative subjects of research.

He then says that the precept "know thyself" is alike applicable to the race or the individual, and continues:—

"It is of no avail to tell us, as some would vainly do, that man's chief business is with the present, and the duties which lie before him in daily life, and that it is of little moment to him whether

his race has inherited this globe for six thousand or for sixty thousand years, or whether he shall continue to inherit it in increasing or decreasing variety. We are compelled, by an irresistible impulse of our nature, to look backward to the past as well as to look forward to the future; and necessarily so, since the main business of the present is to draw from the past, that it may be prepared for the future. The present is thus intimately connected with the past, as it is inseparably interwoven with the future, and cannot be fully understood unless in relation to what has gone before, as well as to that which must inevitably follow. The great business of life—even that which lies most immediately before us—will be more fully understood and more rationally performed the better man knows the place he holds and the relation he bears to the plan of creation. Man's where has descended from his whence, and his whence and his where must indicate his whither. Where are we? whence are we? and whither are we going? are questions which incessantly force themselves upon our attention, and science merely seeks, with all humility and reverence, to arrive at a satisfactory answer. We cannot stem this desire for knowledge, because nature has made it necessary that we should know, and whatever light can be reflected from the past on the path of the present is a guide to the existing, just as every indication of the future, from a study of the past and present, must be an incentive to compliance with its requirements."

At page 22 we read:—

"It thus becomes truly pitiable to hear from certain quarters their misrepresentations of scientific aims and scientific conclusions. In fact, it is easier to bear than to hear them, and one can scarcely avoid the conviction that those who can misrepresent the opinions of others in order to strengthen their own argument would have little hesitation in falsifying facts to subserve a similar purpose."

At page 23,—

"We are anxious at the outset to place the question on a fair footing as regards its religious aspects, because men of science have hitherto been too much deterred from giving expression to their opinions through fear of incurring accusations of scepticism and infidelity. There is nothing more frequent than denunciations from the pulpit and platform against the tendencies of modern science by men who are not only ignorant of the rudiments of science, but who have bound themselves by creeds and formulas before their minds were matured enough, or their knowledge sufficient to discriminate between the essentials and non-essentials of these restrictions. And here it may be remarked once for all, that no man who has subscribed to creeds and formulas, whether in theology or philosophy, can be an unbiassed investigator of the truth, or an unprejudiced judge of the opinions of others. His own sworn preconceptions warp his discernment; adherence to his sect or party engenders intolerance to the honest convictions of other inquirers. Beliefs we may and must have; but a belief to be changed with new and advancing knowledge im-

pedes no progress, while a creed subscribed to as ultimate truth, and sworn to be defended, not only puts a bar to further research, but, as a consequence, throws the odium of distrust on all that may seem to oppose it. Even when such odium cannot deter, it annoys and irritates; hence the frequent unwillingness of men of science to come prominently forward with the avowal of their beliefs. It is time this delicacy was thrown aside, and such theologians plainly told that the scepticism and infidelity—if scepticism and infidelity there be—lies all on their own side. There is no scepticism so offensive as that which doubts the facts of honest and careful observation; no infidelity so gross as that which disbelieves the deductions of competent and unbiassed judgment."

We must content ourselves with only one more extract from the introductory chapter, as follows:—

"As astronomy triumphed over the earlier notions respecting the earth's planetary relations, and geology over the views of its limited antiquity, so will science, so long as it is true to right methods, establish ere long more rational beliefs as to the origin, antiquity, and progressive ascension of mankind. In the meantime, the battle has to be fought against prejudices and misconception; but the warfare will the sooner terminate the sooner that science gives unmistakable utterance to its convictions, and hurls back upon its opponents the unworthy weapons of their unavailing attacks."

In the body of his work, Dr. Page has well discussed the present chaotic state of the science of man, and points out, what others have long seen, that "the anthropologist must mainly abide by his own deductions." The following extract will, we presume, excite the bile of Professor Huxley. Speaking of the absurd distinction made in our classifications of different forms of animal life, the author adds:—

"Strip these 'species' of their colours and covering, and the skeleton of the one could not be distinguished from that of the other; but place the skeleton of the African negro beside that of the European white, and a child might detect the difference."

We believe that in a recent lecture at Birmingham, Professor Huxley spoke of such views as "ridiculous nonsense." We only wish that so distinguished an anatomist may live to see and confess the ridiculous position in which his fanaticism has placed him. It is for those who are in Professor Huxley's ridiculous position that we print the following truism, taken from the conclusion of Dr. Page's admirable little work.

"All races, as well from their inherent natures as from the nature of their position, cannot be dealt with alike; it were waste of energy to attempt civilisation where nature has denied the capability, and it were surely wiser to remove the obstacles to improvement where improbability exists, than to seek for improvement where experience has told us it is hopelessly impossible."

One more extract from this work and we must bid the author adieu, trusting soon again to meet him. In the meantime, we heartily thank him for his first contribution to our science, and trust it may be the forerunner of many others.

"Such are the conclusions to which our inquiry legitimately leads, and which, when rightly viewed, have practical as well as mere theoretic bearings. We say *practical bearings*, for no subject, however novel or sensational, can secure a position among the sciences, or excite a general interest, unless it has something real and practical to recommend it. 'Philosophy,' it has well been said, 'is never more exalted than when she stoops to administer to humanity.' From a knowledge of our zoological relations, then, we may learn more fully the nature of the bonds that connect us with our fellow-creatures, and the offices towards them we are bound to perform. Linked to them by the closest biological ties, yet raised above them by higher physical and mental adaptations, we have manifestly duties towards them; and these duties must surely have a deeper significance to the mind of one who knows all this, than to the mind of another who remains unfeelingly ignorant of the relations that connect him with the rest of vitality."

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#### GASTALDI AND KELLER ON ARCHAIC ANTHROPOLOGY.\*

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At a time when England is about to be visited by so important an institution as the *Congr s International d'Anthropologie et d'Arch ologie Pr historiques*, it is very desirable to take some short retrospect of the results of the very considerable discoveries in archaic anthropology made within a comparatively short time, thus clearing the way for the additions to our knowledge to be anticipated when the Congress begins. The two volumes before us contain a body of facts concerning the lake dwellings found in Italy, Switzerland, and other localities of great interest, worthy of careful study, and they are profusely illustrated by engravings of the objects found in the localities described. To those desirous of informing themselves of the results of the researches which have from time to time been

\* *Lake Habitations and Pre-Historic Remains in the Turbaries and Marl-beds of Northern and Central Italy.* By Bartolomeo Gassaldi. Translated by C. Harcourt Chambers, M.A., F.A.S.L. Longman & Co. 1865.

*The Lake Dwellings of Switzerland, and other parts of Europe.* By Dr. Ferdinand Keller. Translated by John Edward Lee, F.S.A. Longman and Co. 1866.

made, these two books will be very welcome. To some extent the work of Cavaliere Gastaldi possesses the value of being original, as a large portion of it has been written expressly for the English edition, and the whole has been issued with his co-operation.

The first portion of his book is occupied with an account of the objects of the Stone Period, found in the Valley of Aosta, in Sicily, near Mentone, near Spezzia, at Monte Argentario, at Monte Tegnoso near Leghorn, at Brescia, and in various parts of Lombardy, Modena, and Piedmont. Articles and utensils of the Roman period, first, and then of an anterior civilisation, appertaining to the Bronze Age, were also found in the *marne* or marl-beds, and identical in character with those discovered in Switzerland, Germany, and Denmark, near Parma, Reggio, and Modena. M. Gastaldi extends his account to the progress of the excavations in various parts of Italy to 1864. The careful manner in which the engravings are executed render this work excessively valuable to the student, and indispensable to the working library of the anthropologist.

Dr. Keller's work, as presented to the public by Mr. Lee, is of a much more extensive nature, and enters most fully into the pile dwellings of Switzerland. The last few years have witnessed a wonderful activity on the part of explorers, and the important results for archaic anthropology can scarcely be underestimated. There is also great reason for satisfaction in the fact that the natives of Switzerland of all degrees have entered with ardour into the search for and preservation of these valuable records of primeval civilisation. Mr. Lee says: "The investigation of the various lake dwellings is now carried on with a zeal and energy which might be imitated with advantage by our own richer and more numerous societies."

In this valuable work, which has had the very great advantage of having been carefully revised by Dr. Keller himself while in the press, almost everything as yet known of the inhabitants of the lake settlements and their culture is comprised; and both practically and in a literary sense, the task is performed with wonderful accuracy and minuteness. Originally, Dr. Keller embodied the results of his investigations in six reports to the Antiquarian Association of Zürich, but the author and translator thought it better to re-arrange and systematise the facts thus obtained. It had at first been proposed to have assigned certain plates to each settlement; and although this arrangement has been adhered to, as far as possible, the multitude of specimens, some fifteen hundred in all, and the constant increase in their number, caused it to be impossible to carry out this arrangement throughout the volume; but as a very excellent index and a careful description of the plates form a feature of the work, there is no difficulty in finding any special object desired.

A restoration of one of these lake habitations is placed as a frontispiece to the book ; and while it cannot but be in great measure purely ideal, it at any rate affords a very good view of the probable appearance of one of these singular colonies. It has also been carefully reconsidered by Dr. Keller, and corrected in some minor particulars from the sketch familiar to the public in various previous publications. One very important feature of this excellent contribution to the literature of this subject deserves special commendatory notice. Dr. Keller has abstained from *theory*, preferring the more modest but infinitely more valuable arena of *fact*; hence the student of this branch of inquiry may place implicit trust in what is here presented. The plates, which form no inconsiderable part of the volume, have been entrusted to the hand of Mr. Palmer of Newport, who has very skilfully transferred them from the original Swiss plates. Dr. Keller, in the course of his description, has abstained from offering any opinion as to the race-character of the pile-building population, considering this as at least premature in our present state of knowledge.

After some general account of the peculiarities in these buildings, the author proceeds to describe the settlements at Meilen, Moosseedorf, Robenhausen, Irzenhausen, Wangen, Niederwyl, Wanwyl, Allenbach, Markelfingen, the Ueberlinger See, the Lake of Zug, Nidau, Cortaillod, Auvornier, Estavayer, Concise, Greng, Montellier, Morges, and many others. With the Swiss dwellings he contrasts the Italian remains, and the value of the book is further enhanced by various memoirs on specialities, contributed by other writers. Dr. Oswald Heer gives an excursus on the plants of the lake dwellings ; Professor Rütirmeyer treats of the animals ; and an analysis of the bronze implements is furnished by Professor von Fellenburg. The remains discovered in Bavaria and Mecklenburg also receive attention ; and the Irish and Scotch crannogs are treated of by Mr. John Stuart. A more complete and instructive volume could hardly have been put forth ; and it is greatly to be hoped that it is only a precursor of many such contributions to the interesting science of archaic anthropology.

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### Anthropological News.

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ANTHROPOLOGY IN GERMANY.—Professor Vogt has just terminated a course of thirty lectures on Anthropology, at Cologne, Aachen (Aix-la-Chapelle), Essen, Elberfeld, and Crefeld, with signal success. At Aix-la-Chapelle there was some attempt, previous to the first lecture, to interfere



on the part of a mob. and the police had to be called out to disperse the crowd with swords. It is supposed this arose from the opposition of the priests of Rome. At Elberfeld, the Protestants, not to be outdone, followed a similar course; but in both cases science was triumphant. Prof. Vogt is about to lecture at Leipzig, Dresden, Hamburg, Brunswick, Hanover, and Berlin, on the following subjects:—1. Introductory. 2. Cave-bear Period. 3. Reindeer Period. 4. Pile Dwellings. 5. Bronze Age. 6. On the Connexion between Man and the Ape. This series will be concluded about March next.

THE ANNUAL RE-ELECTION OF OFFICERS for the Paris Anthropological Society took place on the 5th of December last, when the following gentlemen were elected to the following offices:—President, M. Bertrand; Vice-Presidents, MM. Lartet and Gaussin; General Secretary, M. Broca; Assistant General Secretary, M. Dally; Annual Secretaries, MM. Letonneau and Ranke; Curator, M. Pratt; Keeper of Archives, M. Lemer cier; Treasurer, M. Bertillon; Publication Committee, MM. Alix, Lagneau and Simonot.

INDIAN NEWS.—We learn, through Dr. Charnock, that a distinguished Fellow of the Society, Dr. Leitner, of Lahore, has in the press a work in four volumes, entitled *The Results of a Tour in Dardistan, Little Tibet, Kashmir, Ladak, Rukshu, Zanskar, and Lahul*. Vol. I will contain the language and races of Dardistan, discovered by the author when sent on a linguistic mission by the Punjab Government, to Kashmir and Chilas in 1866.

Dr. Exton of Graham's Town is about to go on an anthropological tour to investigate the races south of the Zambesi.

In the *Staats Courant* of the South African Republic of 4th September, appears a Government notice and letter from the Landdrost of Lydenburg, notifying that a white family, consisting of a man and wife and two young children, have been brought out and given up to a Commandant, P. J. Coetser, by the Kafir chief Litonga, successor to the late Chief Umzwaas. The man and wife appear, according to the evidence of the Kafirs, to be the only survivors of twenty-seven families, (being a portion of the trek known as the Triegaard's trek), and of which none ever returned, they having been murdered by the natives in the Manekosch land. The man has been among the Knopnose Kafirs from his second year, and later with the Kaal Kafirs, and bears the Kafir name of T'sjaka. Both man and wife are said to be in their manner and habits just like the Kaal Kafirs—only in colour white. Subscriptions are received by the Transvaal Government for the support, religious instruction, and education of these interesting people. Triegaardt, we are given to understand, trekked from "De Plaat," near Baviaan's River, Cradock district, in the Cape colony, about the year 1834, and was accompanied by one Bam, J. Pretorius, and several other families. These people, it is alleged, set out with the mad project of reaching Jerusalem, or the Holy Land, through the interior of Africa. Towards the end of 1835, a person now resident here, who followed the party with the hope of collecting money, some Rds. 32,000 due by certain of them, came across traces of them about the latitude of Delagoa Bay. Here he found they had quarrelled, and separated into two parties, the one proceeded to Delagoa Bay, the other going northwards into the interior. Two or three survivors of those who went to Delagoa Bay, arrived ultimately in Natal by sea, the remainder having died from fever. Those who went northwards are said to have been murdered by a commando

of Kafirs from Moselekatse. But the history of the wanderings of these unfortunate and misguided men has ever since been shrouded in mystery. They left the colony of the Cape anathematizing the British Government, and caring little where they went, so long as they escaped from its (to them) hateful and oppressive rule! Some say that these people now delivered up, are more probably the survivors of another party, known as the Liebenbergs, likewise murdered by Kafirs, but at a later period. Probably inquiries will now be made, which may result in more certain information as to their name and parentage being ascertained.

MEN-APES.—M. de Quatrefages, on presenting to the Academy a work of M. Vogt, entitled *Memoir on the Microcephali, or Men-Apes*, calls attention to the following points: 1. That the result of the author's researches would be to modify, at least on certain points, some of the conclusions at which M. Vogt's predecessors had arrived—Gratiolet, amongst others. In the comparison of the human brain and the simian brain, due regard had not been paid to the modification of the simian type in the New World. 2. That from Darwin's point of view, two creatures belonging to types originally different might trace their descent from one or several common ancestors; but one could not have descended from the other. M. Quatrefages also perceives an essential difference of type in the fact that "man is a walking animal, and walks on the hinder members"; whilst all apes are climbing animals. He therefore hopes "that the world will give up the notion of finding any kind of ape the ancestor of man." This idea, scientifically incapable of proof, is particularly so when considered from the Darwinian stand-point. —*British Medical Journal*.

THE AÏSSA HOUHA ARABS.—Among the anthropological phenomena of the day are certainly to be included the Algerian Arabs, recently exhibiting in London. They are seven in number, and their performances consist of very singular feats indeed—some indeed, never witnessed in Europe before. After, by rude music, exciting themselves to a pitch of madness, one of them, after an uncouth dance, swallows cactus leaves, stands on the blade of a sword, and bites off the head and tail of a serpent, which he swallows, really or apparently; another of the party swallows nails and stones; a third has a rope tied round his waist, and seven or eight men pull vigorously at the ends; another forces his eye out of the socket with an instrument; and finally, a negro, after swallowing lighted paper, places a live coal in the back of his mouth for the spectators to light their cigars at. Our contemporary, the *Pall Mall Gazette* says:—"This entertainment is simply filthy and repulsive to the ordinary spectator, but it offers more than one interesting problem to the student of anthropology. Making allowance for a good deal of pretence and trickery in the performance of the feats, a good deal may be explained by natural causes. For instance, the cuticle of the African is by nature of a horny character; we have frequently enough seen negroes take up in their fingers red hot coals to light their pipes from, without apparently suffering any pain. Such being the normal condition of the skin, it might be prepared into a kind of hide which shall resist not only the fire but the sword. Whether the skin inside the mouth possesses any peculiarity in the African we shall not pretend to say. Again, Nott and Gliddon, in 'Types of Mankind,' advocate the theory that each human type resembles in character and personal appearance the other animals which inhabit its peculiar region. Thus the Esquimaux resembles the White bear, the Mongol resembles the

wolf, and the negro resembles the ape—which justifies slavery. We have no doubt that these ingenious Southerners would point to the long-necked Arab, who digests stone, glass, and nails with ostrich-like facility, as an additional proof that their fantastic theory is the correct one. But as to the gouging business we must confess that we can offer no explanation, even of the most unreasonable kind, and we hope that some oculist will deign to give his attention to the mystery."

A HUMAN SKULL has been recently discovered in California, at the depth of 130 feet in the pliocene, contemporary with the rhinoceros, the camel (or a species allied to it) and the fossil horse, in an antiquity far beyond that of the flint makers of Abbeville and Amiens, and outreaching all human estimates of time. The following is a summary of the facts:—"A human skull was found in a shaft sunk on a mining claim at Altaville, near Angelo, Calaverus County, California, by a Mr. James Matson. Mr. Matson states that it was found at a depth of about 130 feet, in a bed of gravel five feet in thickness, above which are four beds of consolidated volcanic ash, locally known as 'lava.' These volcanic beds are separated from each other by layers of gravel, described thus:

1. Black lava	...	...	...	40 feet
2. Gravel	...	...	...	3 feet
3. Light lava	...	...	...	30 feet
4. Gravel	...	...	...	5 feet
5. Light lava	...	...	...	15 feet
6. Gravel	...	...	...	25 feet
7. Dark brown lava	...	...	...	9 feet
8. Gravel	...	...	...	5 feet
9. Red lava	...	...	...	4 feet
10. Red gravel	...	...	...	17 feet
Total				153 feet

The skull was found in bed No. 8, just above the lower stratum of lava. It was covered, and partly encrusted with stony matter. The portions preserved are the frontal bone, the nasal bone, the superior maxillary bone of the right side, the malar bones, a part of the temporal bone of the left side, with the mastoid process, the zygomatic process, and the whole of the orbits of both eyes. The base of the skull is embedded in a mass of bone-breccia, and small pebbles of volcanic rock, encrusted with a thin layer of carbonate of lime. It is now deposited in the office of the State Geological Survey. To the most superficial eye it has a remarkable resemblance to the skull of the Digger Indian; the same rather elevated frontal region and yet large cerebellum, making the animal organs prominent, though showing no marked deficiency in the intellectual process; the facial angle fair, the same width between the eyes and overhanging process over them. The most remarkable feature of the skull was the great thickness of its bone covering; otherwise it was by no means a low or degenerated type. The facts in regard to the discovery of the skull, as stated above, were given in a paper by Professor J. D. Whitney, read before the California Academy of Sciences. He states, however, that he purposes visiting the locality itself, and seeing the exact place in which this interesting relic was discovered.

It is stated by the Sydney papers, on the authority of letters from Fiji, that the Rev. Mr. Baker, Wesleyan missionary at Novora, with a native catechist and his students, have been murdered by a tribe of cannibals. Mrs. Baker and family had arrived at Sydney.

**MASSACRES IN THE ANDAMAN ISLANDS.**—A report has reached Liverpool from Mr. Barge, chief officer of the ship *Assam Valley*, recently arrived at Akyab from Bombay, that on the voyage the ship called at the little Andaman island, and that the captain, second officer, carpenter, and five of the crew went on shore to cut spars. Those who remained on board the ship saw them surrounded in a short time by a large crowd of islanders, who are notorious for their savage and brutal propensities. The ship lay off the island for three days, but no human being except the natives could be seen, and ultimately Mr. Barge thought that the most discreet plan would be to sail for the nearest port and give information. The vessel is owned by a Liverpool firm, and managed by Messrs. Moran, Galloway and Co., of Liverpool. About ten months ago six men belonging to an American barque went ashore on the same island and were murdered.

**ANCIENT ART IN PERU.**—The discoveries in archaic anthropology bid fair to prove fertile beyond the anticipations of all. It is now affirmed that flint arrow-heads and other primitive weapons have been found in such relation to the bones of the mastodon as to imply that the animals perished by the hand of man. We have now to add some new discoveries to the list. In the guano islands of Peru, far below the guano deposits, many objects of ancient art have been discovered as the deposits have been removed. The formation of these deposits is exceedingly slow, and the guano has not perceptibly decreased in quantity for the last three centuries. It is almost impossible to compute the area at which the formation of these deposits began. Many interesting objects have been recently discovered: one is a wooden idol, about one foot high, representing a squatting female, with the legs crossed and the hands placed together across the breast. The ears are bored, and the lobes widely distended with ornaments, such as gave to a certain class of the ancient Peruvians the name of Orejones or Big-Ears. It was found at great depth, firmly imbedded in the guano of the Lobas Islands, with the salts of which it is so completely saturated that it has very nearly the specific gravity of marble. Other objects, formed of thin plates of silver, and apparently struck out by dies, have been found in the Chinca Islands, at a depth of thirty-two feet, representing fishes still inhabiting Peruvian waters. Captain Juan Pardo, an Italian, also discovered near these objects the body of a female, the head lying at a short distance off. The breast and ribs were covered with thin sheets of gold. Unfortunately this was not preserved.

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